DOCUMENT RESUME

ED 065 739 AA 001 034

AUTHOR	Sieber, Sam D.; And Others
TITLE	The Use of Educational Knowledge; Evaluation of the Pilot State Dissemination Program. Volume 1: Goals, Operations and Training. Final Report.
INSTITUTION	Columbia Univ., New York, N.Y. Bureau of Applied Social Research.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C.
BUREAU NO	BR-0-0734
PUB DATE	Sep 72
CONTRACT	OEC-0-70-4930
NOTE	592p.
EDRS PRICE	MF-$0.65 HC-$19.74
DESCRIPTORS	Action Research; Administrator Role; *Change Agents; Consultants; Counselor Role; Educational Change; Educational Objectives; *Educational Research; Extension Agents; Formative Evaluation; Guidelines; *Information Dissemination; *Information Retrieval; Interaction Process Analysis; Measurement Instruments; *Pilot Projects; Program Evaluation; Questionnaires; Rural Schools; School Personnel; Search Strategies; State Programs; Training; Urban Schools
IDENTIFIERS	Field Agents; *Pilot State Dissemination Program

ABSTRACT

The Pilot State Dissemination Program of the National Center for Educational Communication, carried out in three target states by field agents, is evaluated as to goals, procedures, and outcomes. The seven parts of Volume I, and their chapters, are as follows: Part I, Goals: Alternative Goals of Extension-Retrieval Projects; Part II, Field Agent Roles in Education: The Inout Interaction Phase; Relations with the Retrieval Staff--Referring and Screening; The Output Interaction Phase--Delivering and Assistant; A Statistical Profile of Field Agents' Activities and Clients' Evaluation; Part III, The Information Retrieval Process; Establishing an Information Retrieval Center--Problems and Solutions; Operating an Information Retrieval Center--The Process and Its Determinants; Summary and Conslusions Regarding Retrieval Activities; Part IV, Organizational Issues: Issues in the Internal Management of Extension-Retrieval Projects; Inter-Organizational Relations; Part V, Training: The Training of Project Staff--Methods, Outcomes and Continuing Needs; Part VI, Outcomes of the Program: Outcomes of Field Activities; Outcomes of the Retrieval Process; and Part VII, Recommendations: Recommendations for Future Projects. (For related document, see ED 065 740.) (DB)

ED065739

BR 0-0734

COLUMBIA UNIVERSITY

BUREAU OF APPLIED SOCIAL RESEARCH

VOLUME I

THE USE OF EDUCATIONAL KNOWLEDGE

Evaluation of the Pilot State Dissemination Program

Sam D. Sieber
Karen Seashore Louis
Loya Metzger

AA001034

BUREAU OF APPLIED SOCIAL RESEARCH

Columbia University
605 West 115th Street
New York, N. Y. 10025

The Bureau of Applied Social Research is an instrument of Columbia University's Graduate Faculties for training and research in the social sciences. The Bureau has for many years served as the research laboratory of the Department of Sociology, and it also facilitates social research by students and faculty of other departments and schools of the University. The Bureau's governing board includes representatives from all of the University's social science departments and several professional schools.

The Bureau carries on a program of basic and applied research under grants and commissions from foundations, government agencies, social welfare and other nonprofit organizations, and business firms. In so doing it provides experience on major empirical studies to graduate students and makes available data and facilities for student projects; it provides research facilities to faculty members; it offers training and consultation to visiting scholars, especially from social research institutes in other countries; and it makes the results of its investigations available through publications for lay and scientific audiences.

A bibliography of Bureau books, monographs, articles, unpublished research reports, dissertations, and masters' essays may be obtained from the Bureau's Librarian.

Final Report

Contract No. OEC-0-70-4930

The Use of Educational Knowledge

Evaluation of the Pilot State Dissemination Program

Sam D. Sieber

Karen Seashore Louis

Loya Metzger

Bureau of Applied Social Research

Columbia University

September, 1972

The research reported herein was performed pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U.S. DEPARTMENT OF HEALTH

EDUCATION, AND WELFARE

Office of Education

CONTENTS

VOLUME I -- GOALS, OPERATIONS AND TRAINING

INTRODUCTION. 1

PART I -- GOALS

Chapter 1 -- ALTERNATIVE GOALS OF EXTENSION-RETRIEVAL PROJECTS. . . 21

Response Sets of the Directors Regarding Priorities and Difficulty 32

The Client Scope of the Projects 39

Relations with Intermediate Structures 48

Degree of Field Agent Initiative and Involvement 50

The Retrieval Process. 57

Outcome Goals. 59

Major Goals That Caused Problems 61

PART II -- FIELD AGENT ROLES IN EDUCATION

Chapter 2 -- THE INPUT INTERACTION PHASE. 65

Gaining Access and Acceptance. 71

Levels of Access (Position of Clients) 77

Diagnosis _versus_ Acceptance of Felt Needs. 83

Building Trust and Confidence. 89

Conclusion 95

Chapter 3 -- RELATIONS WITH THE RETRIEVAL STAFF -- REFERRING AND SCREENING 97

Communicating the Client's Request to the Retrieval Staff. . . 98

Centralization _versus_ Decentralization of Retrieval Activities 102

Screening of Material by the Field Agent 113

Chapter 4 -- THE OUTPUT INTERACTION PHASE -- DELIVERING AND ASSISTING 119

Deciding About Initial Follow-Up. 123

Problems in Follow-Up

Under-Involvement and Over-Involvement 132
Choosing Options and Strategies. 148
The Impact of Clients' Expectations. 163
System Constraints and Contextual Influences 165

Solutions to Problems

Using the System 170
Delegating Responsibilities. 176
Record Keeping 179
Timing According to School Year Schedule 180
Setting Up a Team of Agents. 182

Chapter 5 -- A STATISTICAL PROFILE OF FIELD AGENTS' ACTIVITIES AND CLIENTS' EVALUATIONS. 185

The Positions of Clients in Target and Non-Target Areas . . . 186

Personal Assistance From Different Sources. 191

Activities and Traits of Field Agents as Perceived by Clients 200

PART III -- THE INFORMATION RETRIEVAL PROCESS

Chapter 6 -- ESTABLISHING AN INFORMATION RETRIEVAL CENTER -- PROBLEMS AND SOLUTIONS. 215

Computer Related Problems

Turnaround Time 216
Irrelevancy and Inadequacy of Materials 221
Pre-Packaged Information. 227
Cost. 231
Manual Search *versus* Computer 235
The QUERY Program 238

Furnishing the Client with Complete Copy

Microfiche Copy or Hard (Printed) Copy. 247
Paying for Complete Copy. 249
Microfiche Hardware 250
One State's Experiences 252

Record Keeping and Filing 255

Staffing. 263

Other Activities

Use of Consultants. 267
Selective Dissemination 267
Exemplary or Promising Practices. 269
Screening 270

Recommendations for Future Projects 274

Chapter 7 -- OPERATING AN INFORMATION RETRIEVAL CENTER -- THE PROCESS AND ITS DETERMINANTS. 279

Type of Search. 281

Turnaround Time 299

Characteristics of the Requester and His Context. 322

Method of Referral. 333

Chapter 8 -- SUMMARY AND CONCLUSIONS REGARDING RETRIEVAL ACTIVITIES. 341

PART IV -- ORGANIZATIONAL ISSUES

Chapter 9 -- ISSUES IN THE INTERNAL MANAGEMENT OF EXTENSION-RETRIEVAL PROJECTS. 363

Problems of Project Management. 369

Allocation of Time to the Project 372
Keeping Informed About the Project. 377
Providing Instrumental Guidance, Assistance and Support . . 383
Keeping Staff Members Informed about the Work of the Project Director 398

Styles of Management. 403

Solutions and Recommendations 406

Chapter 10 -- INTER-ORGANIZATIONAL RELATIONS 409

Linkages with U.S.O.E.. 415

Linkages with the Evaluation Team 418

Linkages with the Training Team 420

Linkages with the State Education Agency. 420

Linkages with Resource Agencies 434
Linkages with Intermediate Education Agencies 440
Linkages with Local Schools 447
Conclusion. 448

PART V -- TRAINING

Chapter 11 -- THE TRAINING OF PROJECT STAFF -- METHODS, OUTCOMES AND CONTINUING NEEDS 451

PART VI -- OUTCOMES OF THE PROGRAM

Chapter 12 -- OUTCOMES OF FIELD ACTIVITIES 505

Subjective Appraisals 507
Actual Use. 515
The Influence of the Field Agent. 529
  Subjective Appraisals 530
  Actual Use. 535
Client Demand: Two Final Measures of Satisfaction. 554

Chapter 13 -- OUTCOMES OF THE RETRIEVAL PROCESS. 557

Turnaround Time 557
Type of Search. 567

PART VII -- RECOMMENDATIONS

Chapter 14 -- RECOMMENDATIONS FOR FUTURE PROJECTS

Organization 585
Information Retrieval 588
Field Agent Work. 591

VOLUME II -- CASE STUDIES OF FIELD AGENTS IN ACTION

PART VIII -- CASE STUDIES OF FIELD AGENTS IN ACTION

STATE A 597

STATE B 655

STATE C 839

APPENDICES

A. Request for Proposal (RFP) for Pilot State Projects

B. Instruments Used in Evaluation

C. Guidelines for Observers and Field Agents

D. Indexing Scheme for Qualitative Observations

E. Taxonomy of Educational Topics

F. Model Request Form

G. Developing a Strategy Based on Particular Clients and Their Setting

H. Outstanding Training Needs

I. Measuring the Goals of Action Programs

J. Formative Evaluation -- An Exploration with Case Materials

K. Tables

L. Return Rates of Questionnaires

INTRODUCTION

Only a decade ago it was fashionable among educational statesmen to bemoan the low level of coordination and institutional development in the field of educational research. In an overview on the subject in 1963,[1] the senior author drew upon many observations and recommendations by educational planners to emphasize the importance of strengthening the supply of exemplary research -- through early recruitment and training, better relations with the liberal arts and sciences, the conversion of service into demonstration and feed-back from the field, and the improvement and expansion of research institutes, centers, bureaus, and the like. At the time, the Cooperative Research Program was only in its sixth year; and despite the sudden and dramatic rise in funds for project research provided by this program, few efforts at institutional development and dissemination were in evidence. Fragmentation and organizational stagnation still characterized the field, as had been true for the previous forty years.

In the decade since our review, a great many organizational changes and studies have taken place, including the founding of multi-disciplinary R&D centers and of research training programs and related developmental activities, studies of manpower supply and demand in R&D, and studies of training and of the quality and impact of published research -- almost all of which efforts were supported by the federal government. Concurrently, certain tentative steps were being taken to improve lines of communication with practitioners. The establishment of ERIC (Educational Resources Information Center) and its related activities by the U.S. Office was perhaps the major new attempt to provide a pipeline for the delivery of educational research and other exemplary information to settings of practice. Meanwhile, exportable "products" were being developed in R&D centers, in Regional Labs and in other developmental workshops located at many levels of the educational establishment, but these were slow in making their presence known to school practitioners. In short, it seems safe to assert that while the supply of educational knowledge has been inflated beyond the highest hopes of planners only a decade ago, the dissemination and use of that knowledge in local school systems has only barely begun.

---

[1] Lazarsfeld, Paul F. and Sam D. Sieber, Organizing Educational Research. Englewood Cliffs, N.J.: Prentice-Hall, 1964. Many of the ideas set forth in this publication were later documented and elaborated in The Organization of Educational Research in the U.S., CRP Project Report No. 1974 (Bureau of Applied Social Research, Columbia University), 1966.

While it is always risky to stipulate the extent to which research and its products have been introduced into educational practice, certain conclusions from studies cited by Gideonse suggest an unimpressive showing over the period of the 'sixties when the supply side of R&D was being massively injected with new funds. Here are a few excerpts from Gideonse' report of 1969:

> Surveyed in 1966, 85.9 percent of the elementary schools and 83.8 percent of the secondary schools in the estimated 12,130 school systems enrolling 300 or more pupils reported that no team teaching practices were provided. Eight and seven-tenths percent of the elementary schools reported team teaching was available to all students who were eligible and 11 percent of the secondary schools.[1]

---

[1] Hendrick Gideonse, Educational Research and Development in the United States. U.S. Government Printing Office, Washington, D.C., 1970. p.144.

> A sample of the 12,130 systems with over 300 pupils enrolled revealed that 8.1 percent of the systems had nongraded organizations available to all eligible individuals.[1]

> Slightly more than 10 percent of the elementary schools in the systems in the sample reported that (programmed instruction) materials were available to all children who were eligible; the corresponding figure for secondary schools was 12 percent. If those systems which provide some access to programmed instruction are included in the totals, the percentage for elementary schools rises to 16.5; the secondary school figure rises to 21.8 percent.[2]

> A 1966 study of the use of programmed materials in foreign language instruction surveying 378 school systems with 5,000 or more students found that 14 percent of the 249 respondents use or planned to use such materials.[3]

> (In a special 1968-69 study) more than half of the 33,731,000 students included in our projection get no exposure to 13 of the 17 specified innovations...it seems clear that in most subjects the great majority of the students in our projection of 33,731,000 are studying curriculums that are unchanged since 1965; and that in the important field of science, mathematics, and reading roughly half are using relatively old materials. In general, a lower percentage of students in the smaller districts have access to new curriculums than in the larger districts.[4]

> ...we have not yet been able to collect very good evidence on the impact of specific research and development activities on educational practice and, where such evidence has been collected, it has generally tended to demonstrate rather low levels of effect.[5]

These are the parameters against which the Pilot State Dissemination Program needs to be measured. In our opinion, findings such as those cited above signify not only a gap, but a Hellespont.

---

[1] Ibid., p.144.

[2] Ibid., p.144.

[3] Ibid., p.145.

[4] Ibid., p.147.

[5] Ibid., p.153.

The lag in the development of "delivery systems" had disturbed us for some time prior to our investigation of the Pilot State Program. As a matter of fact, in the early monograph mentioned above the question of the demand by school personnel for disciplined inquiry was also broached. If practitioners continued to view research and its implications for practice with skepticism, indifference or naïveté, it was suggested, then even the most exemplary efforts to strengthen the "knowledge base" would come to nought. Faddism, on the one hand, and recalcitrance, on the other, would continue to be the Scylla and Charybdis of the American educational scene. Further, lacking a strong demand for research, we believed that the knowledge base itself would lack the stimulation and feed-back from the field that would give it the vitality, realism, and focussed direction that were sorely needed. As we stated it then:

> If practitioners are indifferent to research results, then graduate students will be discouraged from entering a research career, and professional researchers will feel that their best efforts will remain unrewarded by recognition among practitioners. A corollary to this proposition is that research will be concentrated on certain kinds of problems which do interest practitioners. What is the optimal size of a classroom or a study body? What are the academic consequences of ability grouping? At what age can children most readily learn French? -- these are some of the questions which arise among practitioners but which in their stated form have limited implications for our knowledge of educational processes and may even hamper the search for long-term solutions.
>
> Perhaps a more serious matter from the standpoint of research encouragement is the widespread demand for field services rather than research findings, a situation which we have already discussed in terms of the attractiveness of field services to educational experts. Lacking a clear idea of what constitutes research, practitioners may well confuse the latter with field services, which consist largely of consultation and social bookkeeping. This could lead them to believe that they have fulfilled their obligations to keep in touch with the frontiers of scholarly activity by commissioning a field service worker to conduct a survey of the school system or to give advice on educational trends which should be followed in order to "keep up to date."...

> There is another major consequence of a general unwillingness among practitioners to try out plans based on research. If research results are not implemented, it is impossible to evaluate them under normal conditions; consequently, researchers will remain ignorant of the reliability of their inquiries and, hence, of the actual utility of the research results...[1]

It was this concern which originally drew us into a consideration of an optimum strategy for increasing the demand of school personnel for quality and discipline in educational scholarship.[2]

Looking into the literature on educational change efforts, the director of the present study concluded a few years ago that three basic strategies were being promoted; and that each strategy was founded on a different set of assumptions about practitioners.[3] One strategy viewed the educator as a rational, information-processing agent who is eager and willing to read, listen, digest and implement the conclusions of research, graduate courses, conferences, and the like -- in short, all of the dissemination measures that are content to rely on one-way, and frequently impersonal, communication. The enemy, very simply, is ignorance. Hence, we have called this approach the Rational Man strategy. ERIC was only a more efficient newcomer to this strategy.[4] And while the cost and coverage of the Rational Man approach might make it appear attractive, its yield seems to have left a dismal record of failure. For the strategy ignores the factors of personal and professional motivation, structural constraints and technical assistance.

---

[1] Paul F. Lazarsfeld and Sam D. Sieber, op.cit., pp.52-53.

[2] The senior author's interest in this area was originally pursued and greatly stimulated while serving on the AERA's Committee on Research Utilization, then chaired by Matthew Miles, which among other things instigated Havelock's review of the literature on the diffusion and utilization of knowledge in education. (See Ronald G. Havelock, Planning for Innovation, Center for Research on Utilization of Scientific Knowledge, University of Michigan; Final Report, USOE Project No. 7-0028, July 1969.)

[3] Sieber, Sam D., "Images of the Practitioner and Strategies of Educational Change," Sociology of Education (forthcoming).

[4] About two years after its inception, ERIC itself was reported as being "extensively" used by only 2 percent of the school districts in the nation, according to a survey of district administrators and their staff. (cont.)

A second strategy has sought to overcome the deficiencies of the first by resort to interpersonal, two-way communication that probes the "resistances" to change and instills the sense of security necessary to take positive and enduring action. Stemming from the group dynamics and sensitivity training tradition, this strategy is rooted in the assumption that practitioners are cooperative by nature -- and so, we have called it the Cooperator strategy.[1] And yet, one becomes discouraged by the time-consuming, interpersonal contact which is required to make this strategy work, its lack of intellectual substance, and the harsh fact that practitioners are imbedded in organizational settings which can thwart the most zealous efforts to cooperate with change-agents. It seemed to us, therefore, that this strategy also was limited in yield, as well as in coverage.

There is a third classical strategy, one which depends upon legal prescriptions and suitable sanctions for non-compliance. The whole body of educational law and bureaucratic regulations furnishes the tactics of this strategy. Communication is two-way, as with the Cooperator strategy, but now orders travel down and evidence of compliance travels up. This

---

(cont.) Stephen K. Bailey, "Significance of the Federal Investment in Educational R&D," Journal of Research and Development in Education, Vol. 2, No.2 (summer, 1969); p. 31.

[1] The strategy described here is simply a more psychologically oriented version of consultantship.

strategy, then, seems to rest on a set of assumptions which characterizes the educator as a quasi-professional functionary who is powerless to resist the dictates of local regulations and of state and federal law. Hence, we have called this approach the strategy of the Powerless Functionary. But despite the apparent yield of the strategy over the history of American education, and its special ability to attack structural barriers to change, it seems to us that a climate of acceptance has generally preceded the promulgation and institutionalization of new laws and rules; and that if such a climate has not already evolved, or been prepared by someone, then there are many opportunities for evasion, veto and sabotage. This is especially the case given the "home rule" ideology of American education. It would appear, therefore, that this strategy too has certain patent shortcomings.

It is not sufficient to analyse away the classical change-strategies of education by smugly enumerating the barriers to change, however. If the demand side is to be vigorously and effectively attacked, it needs a new amalgam -- one which will take advantage of the strong points of each of the three classical strategies while compensating for their distinctive weaknesses. We therefore sought to formulate a composite strategy, and our efforts in this respect are spelled out in the article referred to above. When the opportunity arose to evaluate the Pilot State Dissemination Program of the National Center for Educational Communication, USOE, we embraced it as a chance to test our ideas about change-strategies on an experimental program which, to the best of our knowledge, approximated more closely than any other the composite model that we had outlined.

Briefly, the Pilot State Dissemination Program sought to combine the interpersonal, Cooperator strategy with the impersonal, Rational Man strategy -- for it brought together educational extension agents, on the one hand, and the voluminous resources of educational expertise (ERIC, CIJE, the products of regional labs and ordinary library facilities), on the other. Three states were selected by the U.S. Office for the tryout. In each state field agents, as they are called in our report, were to meet with prospective clients within designated target areas, identify their need or problem, refer this need to a retrieval staff located in the state education agency who would perform either computer or manual searches, receive the information (in the form of abstracts, micro-fiche, bibliographies, hard copy, or even technical assistance) and deliver it to the client -- all within as short a time as possible. The field agents were also generally expected to help clients to interpret or adapt the information that was delivered, to appraise its applicability, and to consider the needed steps for use or implementation, and perhaps even help with implementation. In addition to this informational function, it was understood that the field agents might try to improve lateral communication between districts, consult in their own specialty, inaugurate teacher workshops or self-renewal activities, and so forth. The technical assistance of SEA staff was also to be enlisted. As befits a pilot program, a good deal of operational flexibility was permitted and even encouraged. Although there were important and perhaps crucial differences, on the whole the program bore a family resemblance to the county agent system in agriculture.

The target areas within the three states varied in nature and in size. In State A, they consisted of two counties, one rural and the other a mixture of rural and urban; in State B, of three regions, all rural;

and in State C, of two school districts, one rural and the other highly urbanized. (The areas are described in detail in the introductory sections to our case studies.) One field agent was assigned to each of the target areas, making a total of seven agents. There was a single project director in each state; and the number of full-time retrieval personnel varied from one to seven. One of the states used its own facility for computerized searches, while the other two used a regional retrieval installation. These variations in the administration of the three state projects furnished us with the opportunity to make comparisons between very different modes of operation.

Further, the participation of consultants from the SEA and elsewhere made it possible to compare the work of specialists with that of field agents. Also, two of the states inaugurated a program of "district information representatives" in many of the non-target areas, making it feasible to compare the outcomes of these internal, part-time information specialists with those of the external, full-time field agents. And in all three states, there were a number of requesters who contacted the retrieval offices directly without the intermediary of either field agent or district representative. All of these natural variations within each state made it possible to observe the work of field agents from a comparative perspective, and to replicate these observations within three different settings.

The one element of our proposed, composite model that was absent from the program's manifesto was power -- the vested authority to impose change by fiat and to demand evidence of compliance. For this reason, we undertook the evaluation with some skepticism, or at the very least, with bemused impartiality. While we felt that the extension agents would be able to establish contact, rapport and credibility with their clients, we suspected that the authority structure of education -- which reaches all the way from the classroom in the form of student accountability, scheduling and allocation to higher levels of state and federal law -- would hinder whatever change efforts might be contemplated by school men. In this suspicion we were sufficiently wrong to merit close study of the evaluative results contained in this report.

To put it as concisely as possible, according to our survey and interviews with clients, the extension agents whom we shadowed for a period of almost two years (backed up by their retrieval teammates and project directors located in the SEAs) succeeded in producing concrete reforms in administrative and classroom practices in rural and urban areas which, for the most part, were operating substantially below the standards of modern educational practice. Further, not only did these field agent generalists elicit greater utilization of knowledge on the part of their clients than occurred when information was sought without the intermediary of the field agent, but they were more successful than specialists in bringing about change. This occurred despite the fact that the clients of field agents tended to be lower in the educational hierarchy, and therefore less experienced in using expertise for innovative purposes.

Not only were the field agents able to reach into the lower echelons of the districts where they worked, but the smaller districts which comprised most of the target areas are precisely those in which conventional dissemination efforts have historically had the least impact. According to a survey conducted in 1968-69 of a stratified sample representing more than 9,000 U.S. school districts with student populations between 600 and 100,000, only a fifth of the districts in the smallest size category (600-1,999) reported any use of ERIC as an information source, as did about a third of the districts in the next largest category (1,200 - 2,999).[1] Eighty percent of the districts in the target areas of the Pilot State Program fell within these smaller size categories, and yet virtually all were extensive users of ERIC during the period covered by the Pilot State Program.

The major question that should confront us now is not "were the field agents successful?", for our data amply testify to their impact, but "why were they successful?" None of the seven agents were substantive experts, although all had taught school and several had been administrators. (By and large, their professional background was in rural education.) Their knowledge of information retrieval prior to their recruitment as field agents was nil, their client loads were generally burdensome, and their official authority was utterly lacking. To make matters worse, some had to travel an average of 300 miles a week just to make contact with certain rural schools in their target areas. How could they overcome these burdens and handicaps, and achieve success in areas where generations of experts had typically failed?

In our estimation, the key to the field agent's success is the fact that he is a generalist without authority whose presence is legitimized by the provision of information. By not posing as an expert, a school official, or a change-agent, but as a conveyor of potentially useful information, the agents in the Pilot State Program were able to elicit the trust and to trigger the curiosity of school personnel in most of the schools they visited. When it became apparent to the client that the information had a good deal to offer, which incidentally may have required considerable prodding of the client and highlighting of ideas by the agent, the latter was permitted and even invited to assist in utilization.[1] At some slight risk of being misunderstood, then, the field agents could be characterized as undercover change-agents in the guise of information specialists. It was the information role that gave legitimacy to their presence and activities in the schools, but it was the change-agent role that got things done.[2]

---

[1] Gideonse, op. cit., pp. 146-153.

This explanation still leaves unanswered the question of power. How could innovation take place without the manipulation of organizational structure? If the agents were devoid of power in the client-system, how could they overcome those structural barriers to change which are so often adduced by theorists to account for institutional conversatism? The answer is simple. The agents did use the power structure, but on an informal basis. Rarely was a principal or superintendent and his staff uninvolved at some point in the field agent's work with lower level personnel, and frequently these administrators were used as leverages for change.

It is doubtful that the agents could have accomplished this end if they themselves had been part-time members of the system. For the typical teacher or administrator already has a well defined position within the system. Attempts to shed one's official status in order to influence the deliberations and actions of either superiors or subordinates would probably be met with frustration by insiders who were trying to play the role of information specialists. Indeed, our own research shows that such individuals are far less successful than field agents in gaining the appreciation of clients and in stimulating utilization of knowledge (see Chapter 12). Thus, another key element in the complex status of the field agent is his position as an outsider. Remaining outside of the system not only means that the agent is in fact released from internal commitments and social ties, but that he is not viewed by prospective clients as having such commitments and ties. This situation no doubt enhances his credibility and makes him an acceptable collaborator.

---

[1] This general point is developed more systematically in Part VII, Chapter 12, "Outcomes of Field Activities."

[2] A more genteel term for change-agent which is sometimes preferred is "catalyst," but the two terms mean the same as far as the present discussion is concerned.

All of which is not to say that a multitude of problems, false starts, depressed spirits, and even an occasional ejection from a school district did not run throughout the program. As with any role which is largely untried, trial-and-error was one of the best teachers. All such difficulties are presented in this report; in fact, it is possible that we have overemphasized the problematic aspect of the Pilot State Projects. This might give the report a somewhat negative tone, especially since we do not present the beneficial outcomes until Chapters 12 and 13. Deferring outcomes for a later section reflects a conscious strategy, however, for we feel that future administrators, extension agents and information retrieval personnel should be made keenly aware of the stumbling blocks in the business of acquiring and using information in real settings, and of the ways in which these problems were solved by the pilot states, before they launch a similar program. To tout the benefits of a new program after more than a year of arduous try-out without emphasizing its pratfalls and recoveries would do more harm than good. *Many valuable and innovative practices in education have come a cropper precisely because of the innovator's failure to alert practitioners to problems of implementation*. In short, the reader should keep in mind that a central purpose of the pilot program, and one which its participants were frequently reminded of, was to delineate problems in all their starkness, and to demonstrate and propose solutions which might save future administrators the same costly, trial-and-error process.

In the parlance of evaluation research, then, we engaged in a full-scale *process* evaluation. Simply stated, the goal of process evaluation is to measure the *procedures* of an action program and to relate procedures to outcomes in such a way that future programs might benefit from the experience. This approach would seem to be *de rigueur* in dealing with any pilot project. In addition, because of the developmental nature of the program, we sought to feed-back our observations and evaluations to program personnel during the course of operations. Thus, we were also engaged in what has come to be known as *formative evaluation*. (Because formative evaluation is still rather undeveloped, we have tried to codify our experiences with this type of research in a special report, which is reproduced here as Appendix J.)

Finally, in addition to our tasks of process and formative evaluation of the pilot state projects, it was our responsibility to evaluate the activities and outcomes of a special *training* program that was separately supported by the National Center for Educational Communication, U.S. Office. This evaluation is presented in Chapter 11.

Owing to the many goals of our research, a wide range of research techniques was utilized. Of particular interest was our use of field observers over a period of more than a year to "shadow" the field agents and to report on procedures in the retrieval offices of the three states. As it turned out, our observers played a number of roles, including a good deal of formative work. They rendered expressive support to the field agents in the early, insecure phase of their activities, they facilitated communication among the staff members of the pilot projects, they advised the staff in areas of their own special competence, they interviewed clients and fed-back observations, they prodded clients and program personnel to complete our data-collection instruments, they ran interference between the central evaluation personnel and program staff, and they prepared an array of case studies of the field agents in action. (These activities are described and documented in Appendix J.)[1]

Qualitative observations were especially challenging inasmuch as the headquarters of the evaluation team was located some two thousand miles from the two western pilot states and about one thousand miles from the third, southern state. This handicap gave us the opportunity to experiment with a technique which might be called remote participant observation. By resorting to the use of cassette tape recorders in the field, and coding all material (meetings, interviews, spontaneous interactions, and observer reports) in our New York office, we were able to reduce a torrent of daily events and interactions to certain deductive categories for indexing purposes. Events in these categories were then reconceptualized and inter-related in order to yield a new set of variables, but now derived inductively from field events. The indexing scheme, which appears in its final version in Appendix D, was revised several times to fit major new observations and to allow for refinements in previous categories. Thus, there was continual interaction and adjustment between deductive and inductive conceptualization. And when certain categories seemed underrepresented by data, field observers were instructed to focus more attention on these aspects. In this fashion, we were able to approximate exploratory participant observation at a distance. (About 200 cassette tapes were forwarded to the evaluation office for coding over the period of our study.)

---

[1] The question of observational and formative effect on the "natural" situation is also considered in Appendix J.

For the most part, case studies were prepared by the field observers themselves without coding of cassettes. These case studies, which are presented in Volume II, served as an additional source of information. Incidentally, the value of these case studies to students of educational innovation might well extend far beyond their contribution to the understanding of an educational extension service. They would serve, for example, as excellent material for the training of educational R & D personnel generally, for they bring a sense of reality to the abstract discussions that typify the R & D field.

In addition to the mass of qualitative data, a series of structured instruments was used. (See Appendix B for a complete collection of these instruments.) These included weekly activity logs (checklists) for project directors, statistical data sheets for field agents (employed only once), checklists of project goals submitted to all participants at two points in time, semi-structured interview guides for use with field agents, an information retrieval form for recording all actions and dates pertaining to each request which was designed jointly with the project staff (and varied from state to state owing to local preferences), and two questionnaires mailed to clients of the service and a sample of educational personnel throughout the states.[1] In short, we adopted a radical multi-operational approach to the measurement of goals, procedures and outcomes. Accordingly, goals are reported in Chapter 1, procedures are analysed in Chapters 2 through 11, and outcomes in Chapters 12 and 13. A final chapter sets forth recommendations.

Our efforts to integrate the results which are derived from survey techniques, qualitative field observations and documentary analysis might be worth studying. Throughout our report we draw upon these three methods of data collection, employing the results of one technique to buttress, test, interpret, qualify or negate those yielded by another. In fact, the opportunity to explore the integration of techniques was one of our primary reasons for undertaking the study, for we have felt as much concern about the methodology of educational research as we have about its substantive contributions.[2]

Another, major challenge of our research has been presentation of results in a format that would be of value to a wide audience, including

---

[1] Technical information about the survey of clients is given in Chapter 12 where we report the subjective and objective utility of field activities for clients. (Response rates were unusually high, and consequently sample bias was virtually nil as measured by a special follow-up for non-respondents.) Our survey of a stratified sample of all educational personnel in the three states was not launched until the final months of the evaluation. Extensive follow-up was therefore impossible. Response rates for this survey, the results of which are only occasionally reported, are given in Appendix L.

[2] For a classification of the mutual contributions of different methods in multi-operational studies, see "The Integration of Field Work and Survey Methods" by the senior author, American Journal of Sociology, (forthcoming, 1973).

SEA administrators, retrieval personnel, educational extension agents, U.S. Office of Education officials responsible for planning and supporting future programs in dissemination and innovation, R & D personnel in general and evaluators and diffusers in particular, and future trainers of extension agents, retrieval specialists, and project managers. (We also believe that there is something of value in our report for organizational theorists and applied social psychologists. But these more abstract concerns have been underplayed in favor of providing data and direction for the effective planning and implementation of dissemination systems.)

Attempting to serve all of these masters at the same time might appear to be a hopelessly utopian task. To some extent, the emphasis on qualitative material presented within a conceptual framework borrowed from several fields and adjusted to the practical concerns of educators renders the task more possible of achievement. But now it is the turn of the evaluator to be evaluated.

* * *

A final word to educational statesmen. If it is true that the demand side of educational scholarship is ignored at the peril of scholarship itself, then some type of dissemination-extension system might be highly important for the future of R & D. With the hopeful decline in the provision of traditional services to local schools on a fire house basis, and with increased attention and effort devoted to the diffusion of sound practices along with the evidence for and against so that practitioners can select alternatives suited to their own situation, a sharp rise in the demand for disciplined expertise might infuse educational research with higher quality and more realism. And it might increase the willingness of practitioners and politicians to support both basic and applied research with new resources, rather than continuing to disparage the value of "more research" as opposed to more direct services and more untested products.

PART I

CHAPTER 1

ALTERNATIVE GOALS OF EXTENSION-RETRIEVAL PROJECTS

The literature on social action research is replete with references to the necessity of specifying organizational or program goals, and operationalizing them for the purposes of measurement. Herzog, for example, says that "unless the goal is made explicit, there is no basis for saying whether and to what extent it has been reached--in other words, no sound basis for evaluation."[1] And Hyman and Wright note that the initial task of the evaluator is to ". . . formulate in a clear and measurable fashion a list of goals which can serve as the basis for determining the program's relative success."[2] Even evaluation models which purport to be unconcerned with the measurement of goal attainment assume that the evaluator has a basic knowledge of the program's overall goals.[3]

---

[1] Herzog, Elizabeth, Some Guidelines for Evaluative Research, Washington, D.C., U.S. Department of Health, Education and Welfare, 1959, p. 12.

[2] Hyman, Herbert H., and Charles R. Wright, "Evaluating Social Action Programs," in The Uses of Sociology, edited by Paul F. Lazarsfeld, William H. Sewell, and Harold L. Wilensky, p. 757.

[3] Guba, Egon G., and Daniel L. Stufflebeam, Evaluation: The Process of Stimulating, Aiding and Abetting Insightful Action, address delivered at the Second National Symposium for Professors of Educational Research, November 21, 1968, published by the Evaluation Center, Ohio State University, College of Education.

The literature is also quite clear on the fact that it is not always easy to identify the goals of a program, particularly when it is a social action type program. Hyman and Wright note that:

> Most social action programs have multiple objectives, some of which are very broad in nature, ambiguously stated, and possibly not shared by all persons who are responsible for the program. . . . Even seemingly limited, concrete programs with specific aims pose difficulties. Riecken, for example, in evaluating a summer work camp program of the American Friends Service Committee, reviewed a number of official documents describing the program and concluded that 'we have been unable to discover a simple, clearly and comprehensively stated set of aims that will meet with the universal endorsement of the directors of the program.'[1]

Andrew, in her analysis of the problems encountered by four evaluation projects, notes that all four suffered from "overgeneral goal statements, limited specification of rules for selecting appropriate means to move toward goals, and overstress on post factum identification of successful means or techniques."[2]

This latter statement pinpoints the crucial nature of goal specification, not only for the researcher, but for the program practitioners themselves. If goals are not specific, there is a tendency to concentrate on means without considering how these might be related to goals. Further, a vague statement of ultimate goals allows the program to justify a great range of outcomes by reference to these goals.

Lack of awareness or consensus about goals may also cause fundamental problems in the program through goal-displacement, a common process whereby instrumental goals take priority over terminal goals. If the evaluator is to accept the role of monitoring the program under consideration, he must be aware of this possibility so that he can feed back observations about apparent goal displacement as quickly as possible, reminding the administrators of their original, long-range objectives. If the evaluator himself does not have a clear conception of program goals, this function will be undermined.[1]

---

[1] Hyman and Wright, op. cit., pp. 757-757.

[2] Andrew, Gwen, "Some Observations on Management Problems in Applied Social Research," The American Sociologist, Vol. 2, No. 2 (1967), p. 86.

Our evaluation of the U.S.O.E. pilot project for the dissemination of research and other "exemplary" information to school practitioners provides an excellent example of the difficulties of specifying the goals of new programs. The RFP (Request for Proposal) issued by the U.S. Office of Education in early 1970 indicated the general structure of the projects and also a number of project goals, both procedural and terminal. Examples of procedural goals included gaining access to SEA staff consultants who could help schools in using the research results, publicizing the program to the target areas, and developing exemplary information resources. Terminal goals included assisting school personnel in defining and analyzing school problems, offering alternative solutions to the problems encountered, and arranging for follow-up services to schools availing themselves of the service. (See Appendix A for the original RFP.) Within this general framework, however, each of the participating states was encouraged to develop a project that was tailored to the existing capabilities, needs and problems in its area. Even before the first contacts with the three states, therefore, the evaluators were faced with a program that not only had multiple, diffuse goals, but that also permitted some latitude in emphasis on different objectives.

---

[1] For a discussion of the best means of measuring goals of different types of action programs, see Appendix I, "Measuring the Goals of Action Programs."

The proposals from the three states were less specific about their intended outcomes than the RFP. For example, the main statement of purpose contained in State A's proposal was the following:

> The purpose of the pilot project is to design processes to accelerate the improvement of educational practices. This will be accomplished through providing access to and encouraging utilization of research information leading to the installation of tested innovations and programs within a definite framework operated by local school districts.

A few pages later, the proposal stated:

> Needs established by the local councils [to be created] through the application of the model will serve as the areas from which priorities will be selected for local action. These priorities will serve as the problem areas for which specialized information will be requested. Initial problem areas will be defined simultaneously with the implementation of the model.

Such statements of goals were somewhat mystifying, for they were pitched on a rather high level of generality. No doubt many school research offices, regional labs and a host of other agencies would find it easy to subscribe to goals so generally phrased. At one point, however, the proposal made it quite clear that "placing information summaries in the hands of field agents is not the chief purpose of the team processes--the utilization of the information to effect change is the purpose."[1] The remainder of State A's proposal was devoted to the objective of integrating the service into the SEA's mission of "management by objectives," and to details of project organization.

According to the proposal submitted by State B,

---

[1] State A subsequently developed a list of "broad" objectives and "specific" objectives, but this list was not shown to the evaluation team until some time later.

> The primary objective of the proposed project is to develop and test the effectiveness of a dissemination system based upon computerized storage and retrieval of selected information and a network or chain of interpersonal communication links.

From this high level of generality, this proposal also moved down to the level of specifying certain operational steps, such as to "install a systematic procedure to collect and evaluate information materials and files," to "furnish a reader and printer for microfilm and microfiche," and to "work with the state television system to produce staff development programs to transmit to local teachers." Thus, in States A and B we noted the absence of goals on the intermediate level of strategy; instead we were faced with a large array of operational tactics.

State C likewise focussed on operations at a tactical level, but referred to the interpersonal linkage system proposed by Ronald Havelock as the model that it proposed to follow.[1] According to the proposal, the purpose of the project was

> to test over a two-year period a model for increasing knowledge utilization on the part of local school districts based on the work of Havelock with the State Educational Agency assuming the role of the regional resource linking center. . . . [The model] provides for the task of building linkage to resource systems, defining the school districts to be served, a program for establishing the SEA's linking role with these school districts, adoption or adaption of innovation, and the identification of solutions that are missing and the development of solutions to fill the gaps.

The model was to be tested with reference to small rural schools where "constraints on knowledge availability are acute."

In sum, the impression that one gained from reading the proposals was that the central problem of the American educational system--the problem of institutional change and improvement--was going to be attacked by rather picayune tactics, such as an information retrieval center, readers for microfiche, a two-way communication system between schools and the retrieval system, local councils to determine priorities, and similar well-intentioned but purely mechanical means. Surely if the project personnel hoped to make an impact on education, a great deal more attention would have to be devoted to the question of how such tactics and resources were to be coordinated and brought to bear on the ultimate problem of institutional conservatism, in short, the process of dissemination and change that was to be pursued. In slightly different terms, there was a need to work out strategies, to relate tactics to strategies, and to define the kinds of impact that were expected. In particular, the interpersonal change strategies that the field agents would necessarily pursue needed to be given far more searching thought. (The one possible exception to these weaknesses was the proposal from State C, which rested its case on the Havelock model. Curiously, there was extremely little evidence of having studied the research literature on diffusion and utilization of knowledge in education in any of the proposals, although reference to research was precisely what the applicants intended to stimulate in the public schools.)

---

[1] Ronald G. Havelock, A Guide to Innovation in Education, Center for Research on Utilization of Scientific Knowledge, Institute for Social Research; The University of Michigan, Ann Arbor, Michigan, 1970.

The first orientation meeting of USOE, training team, project directors and the evaluation staff made it abundantly clear that the project directors were at that time far more concerned with setting up the program than with defining the specific goals relevant to their efforts. In fact, it would not be an exaggeration to say that they had not given much thought to the specific goals which they expected to pursue. The evaluation team tried to instigate a discussion of program goals at that time, but found that it was difficult to obtain much information in the group situation. The project directors felt threatened by demands that they list their goals; and there was a certain degree of underlying rivalry between the three states which may have contributed to a tendency to become defensive about their programs in an open forum.

The objective of the evaluation staff at that time was severalfold. (1) We were concerned at the lack of interest shown by the project directors in concretely defining their goals, although we understood that problems of staffing and organization were of high priority at the time. We felt that if the states did not define their goals fairly early in the program, they would later find that they were not free to choose between goals, but would have to accept whatever goals were compatible with the organization that had willy-nilly developed. Given the complexity of the program, this could easily lead to overlooking serious problems in organization until the program was well underway. (2) We were interested in finding out the different emphases in project goals between the three states, since this would provide us with a comparative basis for assessing the workability of the program as a whole. Although the states did share many goals, it seemed that their interpretations of these goals differed, and we felt that these differences might well affect the relative success of the three programs. (3) It was apparent that the U.S.O.E. expected the projects to be flexible enough to change if their original plans did not live up to expectations. Because of the fact that the programs were not installed at that time, and all plans were somewhat tentative, we had to anticipate changes in organization and goals over the period of the program, and therefore needed some "base-line" information about goals. (4) The distance between the three states and the locus of the evaluation staff was so great that the opportunities for extensive and periodic consultations about project goals were limited. We also sensed that the project directors were reluctant to spend a great deal of time on such an enterprise, since they were extremely busy with day-to-day organizational matters.

We were thus faced with a situation in which it was extremely difficult to obtain specification of goals and yet this was extremely important, not only for our own research requirements but also for the success of the program. We finally suggested, therefore, that we draw up a list of all of the program goals which might be considered part of a program of this sort. This proposal was unanimously accepted, primarily because it entailed less work for the state project staffs than the otherwise necessary conferences.

Another reason for designing a checklist of goals was to stimulate the project staff to think more concretely about their objectives and to alert them to the range of available alternatives. (See Appendix B for the goals checklists that were used.)

Originally we intended to list only about twenty or so important outcome goals, and to ask the personnel to mark whether they were relevant to the program in each state. As we began drawing up the list, however, we realized that if we were to help the states to achieve their objectives in the course of our formative evaluation, we should pay attention to procedural and input goals as well. We than went back to the original proposals of each state and to the discussions at the planning meeting in order to determine the list of all possible objectives in the three categories of "input goals," "process goals" and "outcome goals." We also added to this list a number of goals that were not made explicit by the project directors, but which we felt might reasonably be considered part of the program. Finally, we included opposing formulations of a few of the more important goals in order to determine how carefully the project staff had considered a particular response.

We then realized that since most of the goals on the list were worthy and admirable, we might run into the problem of almost all of them being checked as part of the state program. Also, we wished to determine the hierarchy of goals in each state or relative emphasis placed on different aspects of the program. We therefore included a five-point scale for each goal ranging from "top priority" to "lowest priority," with the mid-point of "undecided." (The term "top priority" was chosen instead of "highest priority" because we anticipated a strong commitment to a wide variety of goals on the basis of the discussions we had had with the project directors. We felt that if we used the term "top priority," they would be less inclined to mark a great many of the goals at the extreme end of the scale. As a further check on the possibility that they would not discriminate carefully between the relative importance of the goals, we asked them to list a few goals that were the most important overall.)

The project directors were aware that they were to be evaluated according to the goals which they checked, so we attempted to preclude the possibility that they would select only those goals which they felt could be easily achieved by including a second five-point scale on which they could mark the perceived difficulty of achieving each goal, regardless of its level of priority. Our analysis here will be mainly confined to priority levels. In a final section, however, we present the important goals which were regarded as "most" or "next most difficult" to achieve, as signified by the directors after the first year of operations.

The checklists were distributed by mail to the project directors a few weeks after the original meeting. When we began analyzing them, we were gratified to discover that they differentiated between the three programs quite successfully, and both substantiated and extended our intuitive impressions about the underlying emphasis of each state. In the meantime, we had made brief visits to the three states in order to familiarize ourselves with the other personnel involved and the organizational context in which the program was operating. During these visits, we discovered that some of the goals which the project directors had marked as being "top priority" or "low priority" seemed to be contrary to the role expectations and objectives voiced by lower-level project staff members. We concluded that since the state staffs appeared to be unaware of this discrepancy, it might be helpful to document the different viewpoints within the different roles in each state and between these roles. We therefore modified the project director's checklist for administration to the rest of the staff, namely, the field agents and the retrieval personnel.[1]

---

[1] Here we report on the directors' goals only. The goals, or role-expectations, of the field agents are referred to in Part II.

An important aspect of this method is that we were able to obtain this information without time-consuming consultations, which we sensed would antagonize the project staff, and also without imposing our own intuitive definition of goals. Another characteristic of the goals checklist method is that it allows a periodic examination of the evolution of goals within a project. Thus, a year after administering the first goals checklist, we readministered it to all project personnel. (Several additional goals which had come to our attention during the year were included.) Also, in the second goals checklist we asked the staff to report on the difficulty of achieving each goal in the past few months. In our analysis, therefore, we are able to report on the succession of goals during the first year of the Pilot Dissemination Program.

It is clear that this technique of identifying goals is especially useful when the program sites under study are dispersed over a large area, making it difficult for the evaluator to become an integral part of the project. In the case of a restricted pilot project, the evaluator will normally reside near the demonstration site, and can therefore keep a fairly close watch on the development of goals without too much expenditure of money and time. With the growth in the number of large-scale government-sponsored social programs, this convenience is often impossible to attain. Especially when there are a number of sites with somewhat different goals, it would be a herculean task for the evaluator to personally monitor day-to-day changes in the program. Now let us turn to the results of our goals analysis.

Response Sets of the Directors on Priorities and Difficulty

Some of the most striking differences in the checklists of the three directors can be seen with respect to (1) proportion of goals checked as "top priority," and (2) proportion of top goals checked as "most difficult to achieve."

Table I.1 shows the proportion of goals that were checked according to different levels of priority. First, it is obvious that over the first year of the project all three directors tended to downgrade goals from top priority to lower levels. This shift reflects both a more realistic assessment of what can be accomplished by the program and a sense that certain goals had been fairly well achieved and were no longer of signal importance.[1] In a moment we will see which goals dropped in priority and which increased in priority. But first, two further observations are warranted which point up differences between the three state directors.

---

[1] Our feedback of the first goals survey may also have been a factor in reducing the number of top priority goals on the second survey. As we remarked in our report:

> Although we do not question the fact that the states would like to achieve a wide variety of goals in this program, in any pilot project there will exist certain constraints on time and money. As programs emerge, it is often necessary to specify goal priorities fairly concretely so that the staff's efforts will not be diffused. This is particularly true when the desired goals are not easily achieved. It is, of course, impossible from such a brief instrument to draw any conclusions about whether a state's goals are too diffuse, but we urge the project directors to take this matter into consideration.

TABLE 1.1

THE PROPORTION OF GOALS CHECKED BY THREE PROJECT DIRECTORS ACCORDING TO LEVELS OF PRIORITY, 1970 AND 1971

	State A		State B		State C	
	1970	1971	1970	1971	1970	1971
Top priority	46%	28%	20%	16%	43%	32%
Next to top	19	27	41	46	35	32
Undecided	9	14	17	26	5	7
Low priority*	7	16	22	12	17	26
No answer or irrelevant	19	15	--	--	--	3
Total goals	100% (86)	100% (86)	100% (86)	100% (86)	100% (86)	100% (86)

*Combines lowest priority and next-to-lowest on a five point scale, the mid-point being "undecided."

Both in 1970 and 1971, the director of State B checked a smaller proportion of goals top priority than the other two directors, and a larger proportion next-to-top priority. This director also checked a larger proportion of goals as "undecided" at both times. Thus, the director in State B revealed both a more restrained approach to goal setting, and a more tentative view of either the worth or feasibility of certain goals. This perspective should be borne in mind when we examine in detail the activities of State B and the managerial style of its director. (See Part IV, Chapter 9, for a discussion of differences in managerial style.)

Finally, it is of some interest that the director in State A either refused to check a sizable minority of goals (in the first survey) or checked them as "not relevant" to his project (in the second survey where this option was provided). This response pattern was in marked contrast to the directors in States B and C. In effect, the State A director was registering his disapproval of certain goals even as options for his project. "Low priority" was not low enough--they were to be excluded altogether from the realm of possibility. The goals which he marked "No!" on his first checklist were the following:

> Involve as many schools as possible through a wide range of contacts.
>
> Insure that the primary loyalty of the field agent is to the SEA program.
>
> Insure that the primary loyalty of the field agent is to the local schools or their representatives.
>
> Diagnose the problems of clients rather than accept their own definition of needs and problems.
>
> Set up or conduct a training program for the school staff to help them engage in "self-renewal" activities, that is, to be innovative, keep-up-to-date, etc.
>
> Improve inter-group relations in the schools so that change can take place.

In addition to these rejected goals, the director in State A marked several goals as "not clear." What seemed to bother him most deeply was the phrase "change agent," for any goal which included this term was designated as "not clear." Through personal conversation, it gradually emerged that the director in State A did not envision "change" as an intended outcome of the program. In his view, receiving and reading information was the only definition of utilization that he wished to countenance.

Curiously, the de-emphasis on change by this director, at least in his conversations with the evaluators, was at variance with his own proposal which stated:

> Placing information summaries in the hands of Field Agents is not the chief purpose of the team processes--the utilization of the information to effect change is the purpose. . . .

Furthermore, in the first goals checklist, the director allotted top priority to the goal "actively help schools install new practices or programs." On the other hand, he allotted equal priority to "encourage schools to adopt new practices without becoming actively involved in implementation." Thus, not only were his private conversations at variance with his proposal, but his responses in the goals checklist were also contradictory.

This apparent vacillation over the goal of innovation in State A points up the importance of taking into account the political sensitivities of administrators when trying to interpret their objectives. No doubt the main reason that the director in State A vacillated on the issue of "change" was owing to the highly charged climate of public opinion which accompanied desegregation in this southern state. His fear that his program would be seen as another state or federal effort to enforce local change in the schools prompted him to soft pedal the idea of "change." Caution in this area apparently persisted over the duration of the first year, for on the second checklist the director of State A indicated that he was now "undecided" about the active involvement of his field agents in implementation. (In point of fact, his agents had been quite actively "changing" the schools, although they invariably presented themselves to clients as mere information specialists. We will return to this point in our discussion of field agent roles.)

Examination of the levels of difficulty in goal achievement anticipated by the three directors also reveals some telling differences. As seen in Table 1.2, State A's director anticipated a good deal of difficulty in his first checklist (1970), while the other two directors were far more sanguine about accomplishing their "top priority" goals. (The proportions of A, B and C top priority goals which were perceived as "most difficult" were 42 per cent, 6 per cent, and 17 per cent, respectively.) A year later, however, State A had dropped considerably in its appraisal of difficulty, and State C had dropped to a lesser degree; but State B had increased its appraisal of difficulty. Thus, once again States A and B were sharply contrasted, with State C falling into an intermediate position.

TABLE 1.2

THE PROPORTION OF TOP PRIORITY GOALS THAT WERE SEEN AS MOST DIFFICULT BY THE THREE STATE DIRECTORS

	State A		State B		State C	
	1970	1971	1970	1971	1970	1971
	42%	21%	6%	31%	17%	4%
N top priority goals	(38)	(24)	(17)	(14)	(36)	(28)

These shifts are consistent with what we have already observed, namely, that the director in State A took a rather authoritative position on goals (with the notable exception of the sensitive subject of "change"), marking a large number as top priority and rejecting others as definitely irrelevant, while the director in State B expressed greater restraint and more indecisiveness. For now we find that the State A director felt far more optimistic about goal achievement after a year of operations, signifying a greater sense of accomplishment, while the State B director increased in pessimism. In effect, we are presented with an authoritative, no-nonsense and rather self-satisfied approach to the project vs. a cautious, experimental and even self-critical approach. (It should be noted, however, that the greatest satisfaction in the second year was expressed by State C's director, as only 4 per cent of his top priority goals were viewed as having been "very" difficult to achieve.) Thus, the response-sets to a goals instrument may throw considerable light on fundamental perspectives and styles of management. A good deal more will be said on this subject at a later point.

In viewing the small proportion of "very difficult, top priority" goals espoused by the directors in States B and C at the beginning of their projects (6 and 17 per cent, respectively), the evaluation team made the following point in its feedback analysis of the first goals survey:

> Although it is far too early in the project to get a precise idea of where problems in goal achievement will arise, it is important not to underestimate the difficulty of making a major innovation in education. The public schools are

> notoriously conservative institutions and, as any administrator knows, are often reluctant to accept what may seem to them as outside pressure--even if it is in the form of help with specific problems. Even in cases where schools are interested in the program and go on to use it, there may be some reluctance to admit to an "outsider" what their real problems are.
>
> A second state of difficulty may occur when the field agent has been able to get a client to request help with a significant problem. The requirement at this point is to refer the client to sources of useful, practical, tested information. Particularly in the states where a retrieval unit is just being set up, this may not be easy; yet none of the project directors felt that this would be one of their major areas of difficulty, and two felt that it would be one of their least difficult problems.

In light of the many difficulties that were encountered by all three states in pursuing their goals, this cautionary note turned out to be more than justified, and should be taken most seriously by all who venture on the same path of offering a dissemination and extension service. Now let us turn to an examination of the nature of the input, process and outcome goals of the three pilot state directors.

Occasionally we will use indices which combine a number of discrete goals listed in the checklists as well as look at individual items. These indices were constructed as follows. Within each topical category, goals were ranked on a five point scale, ranging from 5 for "top priority" to 1 for "lowest priority" and 0 for no answer or "not relevant." The category "haven't decided" was scored 3, since it seemed that the final decision could move in either direction, that is, towards high or low priority. The total scores for each index were then ratioed on a base of 100 for easy comparison. Thus, each point on our scale was worth 20 points.

The Client Scope of the Projects

An index of overall client scope was composed of several sub-dimensions: breadth of publicity, number of groups who were to be contacted with reference to the program, intended users of the program, and the variety and number of schools whose involvement was sought. A total of 17 goals were included in this general scope index.

In comparing the three states at two points in time, we find that the directors in States A and C lowered their total scope of clientele over the period of the first year. And interestingly enough, the scope of these two states was reduced to approximately the original level of State B. In the first survey of goals, the director in State A received a score of 79 on the index of scope, but this was reduced to a score of 54 at the end of the year. Similarly, the score of the director in State C was lowered from 82 to 68. The director in State B retained his original position on the scope index (62 and 58, respectively). Thus, the clientele scopes of States A and C were reduced to the vicinity of State B's original intentions. This would seem to testify to a certain realism in State B's initial priorities, which we have already seen to have been more restrained than those of the other two states.

If we look at the sub-dimensions composing our total scope index, we are able to discern where reductions of scope were most critical. First, regarding the breadth of publicity efforts (among local schools, parents and other laymen, state officials and legislators, and a national audience of educators and laymen), we find that all three states reduced the priority of goals in this domain. The ratios for each of the three states (with a maximum score of 100) shifted from 75 to 50 in State A, from 65 to 45 in State B, and from 75 to 60 in State C. However, publicizing the program still remained as an objective of middling importance.

Initially, State C placed high priority on publicizing the program among parents and other laymen, while State A was undecided on this goal and State B gave it low priority. States B and C both felt that it was important to publicize the program among state officials and legislators, while State A was undecided on this point. The latter state, however, felt that it was important to ensure a national audience for the program, while neither of the other states was committed to this goal.[1] This downgrading of publicity efforts probably denotes that publicity was no longer deemed as necessary as in the early stages of the program.

---

[1] It is perhaps worth noting at this juncture that State A played host to two national conferences on dissemination during the period of the pilot program. Their intentions in this realm, therefore, should not be construed as mere rhetoric.

Similarly, in the early phase of the program, a good deal of attention had been devoted to gaining acceptance among various groups of clientele (local schools, local educational associations or groups, and local community groups concerned with education). But the lowering of priority in this domain was not as marked as with publicity. Shifts within each of the three states according to emphases on gaining acceptance were as follows: State A, 73 to 53; State B, 73 to 60; and State C, 100 to 87. Gaining acceptance or access in local schools remained highly important in all three states. It was the other two target groups which declined somewhat in importance. Thus, as time went by, the project directors still recognized the importance of gaining access to schools, but tended to ignore local professional associations and community groups.

A declining interest in laymen as potential clients of the service was most marked in States A and C, and was reiterated with respect to still another sub-dimension of our general scope index: the clients from whom requests for information were to be actually solicited. Overall, the scope scores regarding the desired sources of requests revealed the following shifts: State A, 83 to 60; State B, 53 to 63; and State C, 80 to 60. Thus, once again we find that States A and C lowered their sights to a level which was characteristic of State B at the outset of the program. Significantly, these shifts occurred with respect to students, trustees and other laymen in the community, rather than with respect to teachers or administrators. (State B increased its emphasis on trustees, but maintained the same position regarding other client groups.)

A final sub-dimension in our scope index concerns the number and variety of schools to be contacted. The goals that we submitted in this area were the following:

Help schools that have already shown themselves to be innovative.

Reach and help schools that are "backward" in relation to other schools in the State.

Confine the field agent's work to a small, manageable number of schools (scoring reversed).

Involve as many schools as possible through a wide range of contacts.

Here there was no significant shift in level of priorities in any of the three states. The shifts in scores between the two time periods were as follows: State A, 40 to 50; State B, 65 to 60; and State C, 80 to 75. Thus, at both times State C had the widest scope with respect to number and variety of schools, and State A had the narrowest. This rank order, which did not change over time, conforms precisely to the comparative sizes of the target areas in the three states, and hence the variety and number of school districts to be found within these areas. Quite obviously, the larger the territory to be covered by an extension service, the greater the number and variety of school districts which one must expect to serve.

On the other hand, the greater the expanse, the greater the difficulty of reaching clients owing to sheer physical distance, and especially in follow-up activities. In short, the issue of the size of the target area is one that planners of future dissemination programs should weigh carefully, for territorial size has important implications for the number and variety of school settings that can be reached, as well as for the intensiveness of field agent activities and their availability for follow-up work. This is a goal which does not disappear with the passage of time.

The reader may have noticed that the lowering of goal priorities over the first year of the program was directly related to the projects' degree of control over the situation. Thus, publicity declined to the greatest extent, gaining access or acceptance somewhat less so, stimulating requests to an even lesser extent (if we combine all three directors), and reaching the existing number and types of schools not at all. The lesson to be drawn seems obvious. Those features of the situation which are least susceptible to control should be identified as early as possible and appropriate plans made to deal with them, for these are the features which will continue to occupy attention. In the present instance, the possibility of reaching out to the broad range of schools in a given area should be assessed at an early stage in a project, and suitable plans made to insure good coverage--perhaps even by hiring additional agents. (Some negative consequences of overextending the services of a field agent will be spelled out later when we investigate the problem of case load in Part II, Chapter 4.)

The Role of the State Education Agency

Thus far we have confined our discussion to the project's intentions vis-a-vis local schools. The location of the dissemination projects within the SEA, and the role of the SEA in supplementing the service and supporting the projects, were also issues of importance to the project directors. Clearly, the pilot state projects were not operating in an organizational vacuum. Indeed, the RFP to which the states responded had stated that "successful dissemination practices . . . are expected to become standard SEA operations." Accordingly, the goal of installing the project in the SEA beyond the period of federal funding was strongly endorsed at both points in time. We do find, however, that the project directors varied in their interpretation of the program's relationship with their respective SEAs.

With respect to the general goal of "building collaboration between other departments or offices of the SEA and the dissemination program," we find that all three directors signified that this goal was of great concern, again both in the beginning of the program and after the first year of operations.[1] A more specific and problematic issue was the degree to which the projects were expected to be guided by SEA priorities, and their possible role in enhancing the authority of the SEA over local school practices. The following goals were grouped together in an index of SEA Influence:

Communicate the priorities of the SEA to the local schools.

Select for direct Field Agent help primarily major, or important problems as determined by the priorities of the SEA.

Insure that the primary loyalty of the field agent is to the SEA program.

Increased influence of the SEA over educational practices in the local schools (double-weighted in index).

Here the shifts in the positions of the three state directors are quite varied. In State A, the director downgraded the influence of the SEA as an objective of his project from a score of 60 to a score of 20. States B and C, in contrast, slightly raised their scores: State B, 65 to 76;

---

[1] The extent to which the projects were institutionalized within the SEAs is discussed in Part IV, Chapter 10.

State C, 55 to 68.

Virtually all of the decline in State A's emphasis on SEA influence was due to responses to the following goal: "select for direct field agent help primarily major or important problems as determined by the priorities of the SEA." The director in State A shifted his interest in this goal from next to top priority in 1970 to lowest priority in 1971. This shift in emphasis would seem to have marked a basic departure from State A's plan of serving the SEA's "management by objectives" program which had been launched prior to the inauguration of the pilot dissemination project. As stipulated in the proposal from State A:

> [This] proposal for the improvement of educational practice through the installation of tested innovations and programs is structured in terms of the long-range goal of program accountability by means of management by objectives. Initial emphasis will be upon Federal program management. Longer range emphasis is upon similar management by objectives of all State and Federal funded activities.

And more explicitly elsewhere:

> The Field Agents will translate overall objectives into local action following the policies of the State Board of Education as outlined by the State Department Chief.

It was precisely this emphasis in State A that prompted us to include several goals in our checklist pertaining to the influence of the SEA over local schools. Although this influence was highly desired by State A's director at the outset of the program, it seems to have been demoted to a level of insignificance during the first year, according to his responses to our checklist.

To a certain extent, the State A director had fulfilled his promise to meet the priorities of the SEA by heavily servicing its staff during the first months of the project. Up until December, 1970, more than half (55 percent) of the requests for information serviced by the Retrieval Information Unit in State A originated with the SEA staff. This figure contrasts with only 13 percent of the requests during the same period in State B, and probably even a smaller percentage in State C. (State C did not begin keeping a systematic account of requests until a few months later.) It is doubtful, however, that those needs of local educational clients which were met directly by the dissemination project were dictated by SEA priorities. In the first place, the necessity of gaining acceptance of the service induced the field agents to help with whatever problems (or even solutions) were brought to their attention. (See Chapter 2 in Part II for an extended analysis of access problems confronted by the field agents.) In the second place, the administrators of the target area schools were almost completely indifferent to the established priorities of the SEA. For example, when the Superintendent of one of the target areas was asked by one of the evaluators how local administrators felt about the SEA's list of eleven major goals, he replied, "Those are the State Department's goals. We didn't participate at all in drawing those up." Indeed, he had his own list of goals which were drawn up on the basis of a five-year plan that was approved annually by his school board. When asked about the relationship between his list and the SEA's list of priorities, the Superintendent forthrightly replied, "None." When the same issue was raised with an Assistant Superintendent in the second target district in State A, he noted:

> What might be relevant for 93 districts might not be relevant for a local district. The math and foreign language goals, yes; but the others are not applicable to us.

We have dwelt momentarily on this point in order to remind the reader of the power of the local school district over educational priorities. Consequently, aspirations of SEA personnel for widespread adoption of their objectives on a local basis are probably utopian within the existing home rule structure of American education. Hence, it is probably unrealistic (and fraught with political danger) to expect extension agents from the SEA to indoctrinate local educators with SEA priorities. In view of this situation, the marked de-emphasis of State A's project director on "selecting for direct field agent help primarily major or important problems as determined by the priorities of the SEA" over the first year of his project would appear to have been a sensible bow to political reality.

Not only was the goal of SEA influence a rather ambiguous one in State A, but the objective of acquiring technical assistance or consultants from the SEA was also viewed as questionable. The directors in States B and C strongly endorsed calling upon "consultants to answer the special needs of schools" and having "consultants or technical assistance teams actively and directly aid the schools in adapting and installing innovations" at the end of the first year. In contrast, the director in State A marked both of these goals "undecided." This position of the State A director is somewhat curious in view of the stipulations in the RFP:

> [There will be] a Director, located in the SEA, at a level where he can be assigned authority to draw upon consultants within the agency as needed, and coordinate the Team's efforts with related SEA programs [page 1].
>
> The staff will also have established communication and an understanding with relevant SEA staff and developed an inventory and

> analysis of the range of information resources, consultants, and experts available to them both within the SEA and elsewhere [page 3].

The extent to which clients were actually assisted by SEA personnel in the course of the pilot project will be described in Part II (Chapter 5). For the moment, it is sufficient to note that the State A director did not strongly subscribe to this procedure, despite the stipulation of the RFP. Perhaps his attitude, at least as revealed to the evaluation team, was related to his de-emphasis on SEA influence or intervention in local schools in general, which was remarked upon earlier.

Relations with Intermediate Structures

The SEAs were not the only existing organizations to which the pilot projects were integrally related. In States B and C, the field agents were located in intermediate service agencies which even had some authority in their hiring. State A originally planned to set up local councils of educators to determine priorities of need for the service, but apparently this idea was jettisoned early in the life of that state's project. Thus, in response to a goal listed in the first (1970) checklist--"to create intermediate structures between SEA and local schools, e.g., councils of school personnel, local resource centers, etc."--the State A director checked "top priority." A year later, however, this goal was considered "not relevant." Presumably, the existing authority structures in the two district offices, where the field agents were located in State A, were regarded as sufficient to guide and support their work.

It is tempting to speculate whether the field agents would have had greater support and clearer directives in the early stages of State A's project if such councils had been created. In particular, the agent who was located in the urban school bureaucracy might have found it easier to establish the legitimacy and credibility of his extension role had he enjoyed the support of a relatively autonomous, top level body of schoolmen in the area. As noted later in this report, this agent was hampered in his work by the magnitude and structure of the county's district level office, which included a number of specialists who demanded a great deal of the field agent's time and attention in the beginning of the project and who may well have viewed his direct contacts with schools as a threat to their accustomed prerogatives and expertise. A special council to monitor and support the agent's work might have made it possible for him to avert these bureaucratic stumbling blocks.

The use of existing intermediate agencies was regarded as either top or next-to-top priority, at both points in time, by the directors in States B and C. (Problems, issues and outcomes in this area of interorganizational relations will be discussed in Part IV, Chapter 10.) Further, all three directors initially felt that it was highly desirable to "work with groups of schools in the same area who may have similar problems," and this endorsement was repeated a year later. Here, then, is another intermediate level to which the directors tried to gear their dissemination service. (The ways in which this goal was pursued in the field are discussed in Chapter 4.)

Degree of Field Agent Initiative and Involvement

We now move to an area of signal importance--clarification of the field agent's role, the key element in any extension program. The states were initially agreed on several elements in this role, but differed significantly on others. Areas of agreement included the fact that the field agent should serve as a link between the SEA and the local schools, that he should develop warm, personal relations with his clients, and that he should avoid becoming involved in local controversies. Differences occurred over how much responsibility for the installation of new practices should be taken by the agents, how active a part they should take in diagnosing client problems, and how much attention they should give to interpersonal factors that might affect the receptiveness of schools to the program's services.

In the following analysis of the director's intentions regarding the field agents, we divide the field agent's work into two major phases: input interaction with clients (before requesting information), and output interaction (after delivering information).

We have already discussed the importance of publicizing the service, gaining acceptance, stimulating requests and covering a broad range of schools, which properly fall within the input phase, but these goals are shared and pursued by the entire project staff. In addition to such broad operational goals, there are several endeavors in the input phase which are under the field agent's direct and sole control. These aspects of his work might therefore be more appropriately called "role-expectations" because of their relevance to interaction with clients.

First, let us examine the degree to which the field agents were expected, at least occasionally, to bypass the input phase entirely, that is, the question of whether the agents should provide information about new practices without the client's having requested the information.[1] States A and B felt that this role-expectation was next-to-top priority, although the director in State A moved to an undecided position after a year. The director in State C, in contrast, felt that this was next-to-bottom priority at both times. The position of State C on this issue may be explained by the director's strong endorsement of the idea of "problem-solving." Obviously, if information is to be provided without being requested, a client's problem as presented or diagnosed is less likely to be addressed. However, it should be observed that the director in State A also shifted the goal to "undecided." Thus, there was some dissensus among directors on this role-expectation, with only one (B) continuing to endorse the goal after the first year.

Even greater dissensus was evidenced with regard to the role-expectation of "diagnosing the problems of clients rather than accepting their own definition of needs and problems." State A's director was initially uninterested in this approach and remained so (and on several occasions denigrated the "Havelock model" as inapplicable to his project). State B was in favor (next-to-top priority), but demoted the activity to lowest priority a year later. State C, however, shifted diagnosis from next-to-lowest priority to top priority. Here, then, is a role-expectation characterized by considerable between-state variation and within-state fluctuation. (The problems of engaging in diagnosis are analysed at length in Part II, Chapter 2, and no doubt account for the ambiguous status of this desideratum in the pilot state program.)

---

[1] Or as phrased in the goals questionnaire: "Provide information about new educational practices whether or not the client has requested such information."

There was another aspect of initiative in the input phase, however, which was uniformly endorsed by the directors at both times: clarifying and helping to set educational goals. Thus, by no means were the agents expected merely to serve as passive conduits for the requests of school personnel. It is equally clear, however, that in States A and B they were not expected (after a year) to delve deeply into the problem or need presented by the client--or in psychological parlance, to get behind the "presenting symptom" by intensive diagnosis.

Moving into the output phase of interaction with clients, several steps or aspects of this phase of information retrieval need to be distinguished: delivering information, interpreting or adapting information, providing the client with alternative solutions or viewpoints, facilitating field trials of a proposed innovation, helping with implementation, assisting in evaluation, and providing for "self-renewal" activities on the part of clients. (An additional possible step that emerged in some target areas was the screening of information for relevance and interest after it was delivered by the retrieval staff. Had we anticipated this function in the beginning of the project, we would have included it in our checklists.)

Each of these steps was represented by one of our goal statements, as follows:

DELIVERING	Expedite the flow of information from the retrieval system to the client.
ADAPTING	Interpret or adapt information obtained from retrieval system.
POSING ALTERNATIVES	Provide the schools with several alternative solutions to their problems, from which they can choose.
HELPING WITH FIELD TRIALS	Facilitate "field trials" of innovations.
IMPLEMENTING	Actively help schools install new practices or programs.
EVALUATING	Assist clients in efforts to evaluate innovations resulting from the project (second goals checklist only).
SELF-RENEWING	Set up or conduct a training program for the school staff to help them engage in "self-renewal" activities, that is, to be innovative, keep-up-to-date, etc.

As might be expected, all three project directors strongly endorsed *expediting the flow* of information at the beginning and end of the first year.[1] Similarly, *interpreting* and *adapting* the information for clients, and providing them with *alternative* solutions, were also highly endorsed at both times. Only when we move on to *field trials* do we find one of the directors with a lower level of aspiration--but only at the beginning of his project. The director in State A promoted this goal from lowest priority to next-to-highest priority in the course of the year. The other directors felt that assistance with field trials was next-to-top priority at both points in time. Here again, therefore, was consensus on the importance of follow-up activities.

---

[1] It should be appreciated that an emphasis on expediting the delivery of information can interfere with intensive follow-up by the field agent. Thus, as discussed in Part II, Chapter 4, an agent who frequently drops off information without personally meeting with his clients may, under certain circumstances, be doing a disservice to the client.

As already mentioned, there was some uncertainty about the field agents' responsibility for actively helping to install new practices or programs on the part of State A's director. From a position of top priority, this role-expectation dropped to an "undecided" position in State A a year later. Likewise, the director in State B moved from next-to-top priority to "undecided." (At both times, however, it remained next-to-top priority on State C's agenda.) Thus, active implementation was demoted by two directors, which meant that dissensus emerged among the directors after the first year regarding this role-expectation.

The difficulty of engaging in implementation may have been a factor in the mind of State B's director, but not in the mind of State A's director. The latter felt that helping with implementation was "most difficult" at the beginning of his project, but "least difficult" at the end of the first year. Here once again, then, we note a high level of satisfaction with the project's impact in State A. (Later, on the basis of our survey and analysis of request forms (Part VI), we attempt to answer the question of whether this satisfaction was warranted.) The main point with respect to the agent's active involvement in implementation, however, is that this is the first step in the output phase where we encounter some disagreement among the directors.

A related aspect of implementation is helping clients to evaluate innovations or tryouts. This goal was not included as such in the first survey, for it occurred to us only later as a result of certain clients requesting help from the project in evaluation of a new program based on retrieved information. And here once again we encounter dissensus among the three directors. The director in State A avowed that the goal was "not relevant" to his project; the director in State B marked next-to-lowest priority and commented, "It should have a high priority, but we have done very little"; and the director in State C marked it next-to-top priority. It may well have been lack of resources which prevented the directors in States A and B from undertaking this objective; and even in State C, the director noted that this was one of his most difficult goals and commented, "Need assistance in this area." (Problems of implementation are analysed in Part II, Chapter 4; and degree of implementation is discussed in Part VI, "Outcomes.")

Finally, we come to a stage in which the field agent might help his clients to embark on "self-renewal" activities, or as phrased in our checklist of goals:

> Set up or conduct a training program for the school staff to help them engage in 'self-renewal' activities, that is, to be innovative, keep-up-to-date, etc.

Two additional goals bore on self-renewal, although they were not restricted to the field agent's role (they were located in the section of the checklist headed "Outcomes"):

> Increased disposition on part of schools to seek information for problem-solving.
>
> Increased tendency on part of schools to try out new educational practices.

First, let us look at the extent to which the role-expectation of setting up or conducting a training program was stressed for field agents.

The directors in States B and C assigned this role-expectation to a position of next-to-top priority in our initial survey; a year later, the latter director had backed off and dropped the goal to next-to-lowest priority. The State A director, in contrast, shifted from a position of next-to-lowest priority to next-to-highest priority. Thus, two of the directors swapped positions on this goal. This would suggest a rather ambiguous status for "self-renewal" as a responsibility of the pilot state field agents in general.

If we examine the desire to increase the disposition of school personnel to seek information for problem-solving or to try out new practices in the future, we find all three directors strongly endorsing both goals at both times. It is clear, therefore, that the extension service was not conceived of as a hit-and-run affair, although the role of the field agent in establishing a long-range tendency to seek information and new practices through specific self-renewal efforts was less clearly held.

Our analysis of the directors' goals regarding follow-up activities in the output phase can be summed up rather succinctly: the greater the involvement required of the field agent, the greater the dissensus among directors and the greater the fluctuation between the first and second surveys. Thus, delivering, adapting, posing alternatives and helping with field trials all enjoyed relatively strong endorsements and high consensus; helping with implementation opened up an area of disagreement; and evaluating and promoting self-renewal revealed even greater dissensus and fluctuation over the year.

These results point to the importance of squarely facing the issue of the desired degree of field agent involvement in change-oriented activities as early as possible in planning an extension and retrieval service. The ambiguities and problems confronted by the field agents on this score (to be discussed in Part II, Chapter 4) may have stemmed directly from lack of clear-cut guidance from the project directors regarding appropriate depth of involvement. (Suggested guidelines for resolving the question of involvement with particular types of clients are also offered in Part II, Chapter 4.) Given the ever-present problem of overload in the field agent role, questions of involvement and the appropriate use of SEA consultants should be clarified early in the life of an extension and retrieval service.

The Retrieval Process

The project directors were also responsible for management and planning of the process of retrieving and delivering information of relevance to the client's request. While it might appear that information retrieval is by now a fairly straightforward affair because of the many precedents and a rather strong movement toward increasing the efficiency of information retrieval in a wide variety of fields, the pilot states encountered a number of difficulties in setting up their routines. (These are discussed in Part III, Chapter 6.) Thus, the goals of the directors in this area are by no means only of academic interest.

One of the most striking features of their aspirations concerned the speed of turnaround. In his proposal, the director in State A put it this way:

> It should be noted that the key to successful implementation of an adequate information dissemination system is the speed with which pertinent information can be supplied.

State B originally intended to utilize a network of tele-processing terminals within schools, and noted that the system could handle up to 2,000 messages per hour. And State C went so far as to promise a turnaround time of two days:

> The project will develop the necessary storage and retrieval capability to respond with at least two alternative resources with a maximum turn-around time of two days.

The emphasis on speed and efficiency in the retrieval process was clearly apparent in the responses to our checklists of goals. The directors in States A and C gave top priority to achieving "the quickest possible turnaround in information retrieval," and the other gave it next-to-top priority. These priorities remained after the first year of operations. As we shall see in Part III, Chapter 7, "Operating an Information Retrieval Center," the states fell far short of a two-day turnaround, or even a week turnaround--although in some instances there was same-day service. One of the states had an average turnaround of a month.

We have anticipated our findings about the operations of the retrieval offices because we wish to impress upon the reader the possibility of a very large gap between expectations, on the one hand, and achievements, on the other, in the domain of information retrieval. The establishment and operation of a retrieval center is by no means a cut-and-dried affair.

The goal of developing "a highly efficient, computerized retrieval system" was assigned top priority by all three directors in the beginning of their projects, but the director in State C dropped the goal to an "undecided" position after the period of a year. Perhaps this shift signified a realization that efficiency alone was not the be-all-and-end-all of information dissemination. In general, however, all of the goals in our checklist which bore on speed and efficiency were strongly endorsed by the directors.

There was one retrieval goal on which the directors disagreed to some extent in the beginning, but developed consensus over time: the provision of "packages of problem-solving material which may be used and adapted on the local level." The directors in States A and B gave top and next-to-top priority, respectively, to this goal in the beginning, but the director in State C indicated that it was next-to-lowest priority. With time, however, this director promoted the goal to next-to-top priority, which no doubt grew out of his experience with the packages of information provided by the regional retrieval service.

Outcome Goals

Thus far we have looked almost entirely at input and process goals. We also provided the directors with a list of ultimate or outcome goals and, as one might expect, found that virtually all of these goals were strongly endorsed. The only exceptions occurred with the director in State A who, on his second goals checklist, indicated that the following outcomes were "not relevant" to his project:

> Movement from a relationship of authority to one of collaboration between SEA and schools.
>
> Increased competence of SEA to train more change agents in the future.

Increased influence of the SEA over educational practices in local schools.

Greater willingness of local schools to provide funds for change-agent programs.

Also, the following goals were marked "undecided" by the State A director:

Greater understanding in the SEA of local problems.

Improved relations between SEA and the USOE.

Since the latter goal was also marked as next-to-most difficult to achieve, it is clear that the desegregation pressures from the USOE in this southern state had left an atmosphere of distrust toward the federal establishment which may have affected relationships concerning the dissemination program.

Otherwise, all three directors gave top or next-to-top priority to the following outcomes of their projects (in the second goals survey):

SEA

Improved relations between the SEA and local schools.

Willingness on part of SEA to advise other states on dissemination.

Installation of change-agent functions beyond the period of federal funding.

Installation of information retrieval functions beyond the period of federal funding.

Greater willingness of the SEA to support dissemination and change-agent programs.

Schools

Increased disposition on part of schools to seek information for problem-solving.

Increased tendency on the part of schools to try out new educational practices.

Improved practices in schools which produce educational benefits for children.

Better school-community relationships.

Increased solution to educational problems based on new information or knowledge.

Training

Development of a cadre of trained personnel to perform dissemination functions in the future.

Major Goals that Caused Problems

As mentioned earlier, in our survey of goals we furnished the directors with scales of difficulty as well as with scales of priority. If we look at the directors' responses to the second goals survey (which referred to goals of the preceding months), we are able to discern which of their important objectives had given them their greatest trouble--at least according to their own assessments.

In Table 1.3 we have grouped the directors' important goals (top or next-to-top priority) into several broad categories; and it can be seen that difficulty was cited in all of these areas. Further, no single area stands out as having been especially problematic.

One noticeable difference between the directors resides in the domain of organizing the project. In State A, six out of 16 goals fell into this category, as did seven out of 21 in State B. In State C, however, only a single goal fell into this area: "to hire field agents in accordance with specified criteria." And this problem was a reference to a single field agent who had been hired by the intermediate service center and presented to the director as a replacement for a former field agent. Thus, it seems safe to assume that the director in State C felt least

TABLE 1.3

TYPES OF MAJOR GOALS WHICH WERE CONSIDERED DIFFICULT TO ACHIEVE

	Number of Goals		
	State A	State B	State C
Influence on schools			
Help install practices, solve problems, define goals, gain support	2	3	4
Help make schools self-renewing	2	1	1
Help evaluate innovations	-	1	-
Interchange with schools			
Input interaction (stimulating demand, gaining access, etc.)	-	3	2
Output interaction (interpreting, etc.)	2	3	-
Organizing the project			
Setting goals	-	1	-
Building support	3	4	-
Hiring according to specified criteria	2	-	1
Team work, including intermediate agency relations and consultants	1	2	-
Retrieval activities			
(package, screen, provide unsolicited information)	3	1	-
Training			
For oneself	1	-	1
For others in project	-	2	1
Improve SEA-school relations	-	-	3
All other	-	-	1
Total important goals cited as difficult to achieve:	16	21	14
Total important goals:	47	58	55

concern about organizational problems. (The extent to which this complacency was warranted is discussed in Part IV, Chapter 9, "Internal Management.")

Another difference between the directors also relates to State C. The director there was the only one of the three who cited the important goals of improving relations between the SEA and local schools as having been difficult. This suggests greater tension between state and local levels in State C, a situation which is probably related to the director's misgivings about the limited amount of freedom he had in hiring field agents.

Our main observation concerning difficulties, however, is that all three directors reported problems in the important areas of influencing schools, interacting with school personnel in both the input and output phases, organizing and operating the project, and engaging in training. In addition, States A and B mentioned difficult goals in the area of information retrieval. (Specific problems in all of these areas are documented in the remainder of this report.) These results should alert future project directors to the likelihood of encountering problems in goal-achievement fairly frequently. They also justify the emphasis of our report on identifying problems in the operation of an educational extension system despite the successful showing of the projects as a whole after a period of a year or so.

PART II.

FIELD AGENT ROLES IN EDUCATION

CHAPTER 2

THE INPUT INTERACTION PHASE

The Pilot State Dissemination Project has attempted to institutionalize a new role in the schools: that of the educational extension agent, or as we call it throughout this report, the field agent. The U.S.O.E.'s specifications for this role were very general, indicating only that the individual selected should live in the target areas of the project, and serve as a personal linkage between individuals who wished to receive information and possible sources of information at the State Department level. In fact, one of the major difficulties encountered by each of the projects in their incipient phase was defining the responsibilities and desired behavioral patterns for those individuals who would be a vital link in the dissemination process. The shifting priorities of the directors and the dissensus among them concerning the behavior of field agents is indicative of the ambiguities which surround this role.

The process of defining the role of the field agent was especially difficult because of the paucity of similar roles in other contexts to serve as models. The general assumption behind the U.S.O.E.'s program was that the field agent would serve a function similar to that of the agricultural field agent, but in fact there were a number of structural differences between the two roles which made it difficult to apply the agricultural concept without basic modifications in strategy:

1) The agricultural field agent works with individual farmers who are relatively autonomous. The new educational field agent, however, deals with individuals located in formal organizations of some complexity. The educational field agent must therefore work with power structures, formal and informal groups within the organization, and the barriers to access and innovation that result from these factors.

2) The agricultural field agent's job is to "push" certain innovations in farming techniques. The job of the present dissemination program, in contrast, is to solicit the needs of the educational population, and then try to locate material that might be helpful in solving these needs. This means that the educational field agent must cope with a wider variety of issues at any one time than the agricultural field agent. It also raises the crucial issue of how the field agent is to go about identifying the field needs of educators.

3) The agricultural field agent is in direct contact with a research source, the agricultural specialist at the School of Agriculture at the State University. Thus, if he has any difficulties in understanding the research, or how to use the research product, he has a direct line of communication. The educational field agent in the U.S.O.E. Pilot State Dissemination Program is not in direct contact with researchers, and must therefore look to other sources if there is any difficulty in interpreting or using research results.

4) The agricultural field agent, although he must deal with resistance to innovation, has the advantage of working with a population that is motivated to adopt the best practices for their own economic good. The field agent, however, must deal with individuals and groups that are not economically motivated.

5) The results of the agricultural field agent's work are usually quite visible. Thus, it is quite easy to prove that one practice produces more or better wheat than another. The educational field agent's product is more difficult to assess, since there is little consensus among educators on the desirability of specific educational structures or practices, much less on the best means of achieving these ends.

A good deal of work has been done on the organizational change agent, a model that might seem to be somewhat more applicable to the situation faced by the educational field agent. Here again, however, the situation differs along several dimensions:

> 1) Organizational change agent studies have occasionally used as a major variable in measuring success whether the agent is an "insider" or an "outsider" to the organization. Jones, in reviewing the case studies of this type of literature concluded that the inside change agent was somewhat more effective.[1] The educational field agent in this project, however, is not really either inside or outside, but a unique combination. Like an insider, he has a permanent place in the district and is familiar with the area and its personnel; but he is not attached to any particular school and, because his role is new, will probably not be seen by most educators in the area as part of the school system staff. (This will, of course, presumably change as the role of the field agent becomes more institutionalized.)
>
> 2) Most organizational change agents have been invited in for an in-depth diagnosis of the situation, and have a mandate to make recommendations about change and help to carry them out. In effect, they are seen by organization members as "experts." The educational field agent, on the other hand, has not been given a specific task or area to work on, and is not an expert--although he has access to experts.
>
> 3) Unlike the change agent who is located completely inside the organization, the field agent would have a difficult time in fully using the informal network of the organization to achieve certain ends. Aside from the fact that he would first have to gain access to the informal networks, taking advantage of this force could be hazardous since administrators might resent the use of such channels.

The original state proposals for U.S.O.E. support reflected the lack of a well-defined model of behavior for the new educational change agent. Each proposal stressed the fact that the field agent was supposed to be a linker, but gave few specific recommendations in certain crucial areas, such as the degree of directiveness that should be assumed in helping a client to define his educational problem, the level at which the field agent should work within the school system, or the amount of involvement he should have in actually planning and implementing innovations.[1]

---

[1]

An example of the lack of specificity in these proposals may be seen in the following definition of the field agent's responsibilities in one state:

> These professional persons will be members of the staff of the State Department of Education and will be located in offices provided by the school districts under an agreement with the State Department of Education. . . . The Field Agents will translate overall objectives into local action following the policies of the State Board of Education. . . . The agents will relate with empathy to local administrators and will assist in welding a workable team of State and local professionals into a coalition. . . . State goals will be defined in terms of local conditions, and the Field Agents will assist in reconciling differences between the two. . . .

Essentially this proposal defined the role of the field agent only in terms of 1) his organizational locus and 2) the responsibility to mediate between state and local goals. It said nothing about how he was to do this. The other proposals defined the field agent roles at similar levels of generality.

Further information about the state project director's conceptualization of the role of the field agent yielded additional evidence that no one had a clear image of what the field agent was to do, or at the very least that there were latent inconsistencies in the expectations held for field agents. This problem can be delineated more clearly by reference to each of the three states:

---

[1] This observation should not be interpreted as a criticism of any of the three states. In an innovative program such as the present one--a program that is characterized by new structures and roles for all of the participants--it is entirely understandable and even desirable that there be uncertainty as to how the strategies of the program should develop. Also, since the Pilot State program was essentially quite decentralized (although there was variation between the states in the degree to which they emphasized central coordination and direction of field agent activities), it was difficult to define the field agent role without taking into account the local communities and their ideas about the functions of the field agents. Thus, it was necessary that the field agent be allowed a good deal of flexibility at the outset.

> State A: State A initially had the clearest definition of the role of the field agent, which perhaps was owing to the fact that it was the most limited definition. The field agent was not to involve himself in diagnosis to any degree, but was to accept the stated problems of the clients at face value. His main responsibilities were to help the client interpret retrieved material and facilitate the installation of innovations. Great emphasis was placed on the fact that the field agent was not himself a change agent or initiator, but an individual who could help educational personnel by providing the technical and practical assistance needed to make innovations that would be planned by the school personnel themselves. Even here, however, there were some inconsistencies. For example, although the project director felt strongly that the field agent should not consider himself a diagnostician of school problems, he believed that it was acceptable for the field agent to furnish a school person with information that he had not requested--presumably for the purpose of stimulating him to think about an aspect of the school program that had not been previously considered. Although the unacceptable activities were quite clearly defined (i.e., that the field agent should not actively push innovations) the types of activities that were to be regarded as acceptable were less clear.
>
> State B: Discussions and responses to questionnaires sent to the project director of this state indicated that he placed high priority on giving the field agent initiative in diagnosing problems, even when they were not apparent to the school personnel. He also placed high priority on involving state consultants in all phases of the client relationship. He did not, however, feel that the field agents should necessarily work along with the state consultants once they were put into contact with the school. Thus, he expected the field agents to be very involved initially, but ready to "pull out" once an expert appeared on the scene. This conjunction of goals potentially put the field agent in a very ambiguous position vis-a-vis his clients. A further initial problem in defining the field agent role arose from the fact that the project director felt quite strongly that each field agent should develop his own style of operating without specific guidelines from the project director. Thus, the director was manifesting his concern that each agent develop a strategy that was best suited to his situation and to his individual proclivities. On one occasion he advised a field agent who was somewhat

uncertain about his role that he should not discuss the matter in depth with the other field agent in the state. Thus, although the project director had some ideas of his own about how the role of the field agent should develop, the field agents themselves were not aware of his ideas until the project had been underway for several months.

State C: The Project director indicated that he felt that the field agent role should be consistent with the "Havelock model" of innovation in education,[1] that is, the agent should develop intensive relationships with clients and work through with them all of the stages of diagnosing the problem, choosing a solution, building an environment in the school that is open to change, and so forth. Another part of the program that was equally important, however, was the "Technical Assistance" aspect, which involved getting State Board consultants out into the schools in increasing numbers to perform the same functions that the field agent was presumably undertaking. The relationship between the field agent and these consultants was not defined in any detail, except that they were supposed to work together most of the time. Another problem was that the Havelock model presumes an intensive, and therefore time-consuming, relationship. The structure of the program was such that the field agents were each serving eight or nine rural school districts that were spread over a large area. Another goal marked top priority (on a checklist of possible program goals filled out by each member of the project staff) was that the field agent was supposed to serve a large number of schools. The various goals might be seen as incompatible given the human limitations of field agents.

In discussions with the field agents, the project director placed special emphasis on the process of diagnosis as a result of his belief that the overt needs that people voice are usually not the "real" needs; however, on a checklist which asked him to give priority rating to the field agent activity of "diagnosing the problems of client rather than accepting their own definition of needs and problems" he marked this goal low. Furthermore, he did not give the field agents significant help in trying to define what it meant to diagnose, and how the field agent was supposed to go about diagnosing.

The main point that emerges from these experiences is that the role of the field agent was initially quite vague. Not only was there little consensus between the states as to what the field agent should be doing, there were inconsistencies within each state. At this point, however, some conclusions can be drawn about the problems and issues that the seven pilot project field agents faced, and some of the solutions that have been arrived at, both individually and collectively. The incidents and illustrations discussed below are drawn from the first months of the program's operations and do not necessarily reflect present conditions in the program.

---

[1] See Ronald Havelock, A Guide to Innovation in Education, Institute for Social Research, Ann Arbor, Michigan, 1970.

Gaining Access and Acceptance

The first issue facing each field agent was how to sell his service to the educational community. Initial activities were, therefore, publicizing the program, and in the process of publicizing trying to stimulate requests. Prior to starting the job, none of the field agents felt that this effort would comprise one of their more difficult tasks.[1] In fact, however, it proved to be very time-consuming for some of the field agents, and a number of false starts were made. The following cases are illustrative:

> A field agent made initial publicity visits to each school in the district. In regularly scheduled faculty meetings the purpose of the program was explained, and the procedures for retrieval of material gone over in detail. After this series of meetings (where a few requests were received) the field agent waited for people to call her and request the services. After a week or two she was not receiving requests from teachers and began doing some research for the Superintendent of the district in order to gain rapport. Realizing that her initial publicity attempts had not been successful, she adopted two other modes of gaining access: 1) She took advantage of a district-wide textbook fair by setting herself up in a booth with literature on the program. And she reported that a number of individuals came up and asked her for

---

[1] This conclusion is based on the responses of the field agents to a goals checklist. See Appendix B for the checklist.

more information about the program and how they could contact her. 2) She arranged to meet with small groups of teachers in each school on a more informal basis to discuss the problems that they saw in their classrooms. She found that people were more willing to open up about their needs and problems on an individual level than they had been at the larger faculty meetings. This field agent has concluded that formal meetings provide insufficient publicity for a program that requires considerable interest and participation from individual persons in the schools.

Another field agent, who handled several districts, made initial visits to many of the principals and Superintendents in the area, as well as giving a formal presentation to a joint meeting of all the Superintendents. Next, he sent a letter, which was distributed by the principals, to all teachers in his area. This method proved to be quite ineffective as a means of stimulating requests, and the field agent finally decided that the best means of reaching the teachers was to visit in the school lounges, listen to the issues that the teachers themselves raised, and show them how the program could be of use in meeting some of their needs.[1] These meetings produced a number of requests from individual teachers. In addition, this field agent had access to an internal television set that served all of the districts. A short videotape aired over this system also helped to reach a a large number of educators, although the field agent noted that this means of contact served only as a supplement to face-to-face contact.

Another field agent had been a Superintendent in the state where he was now serving. Consequently he enjoyed a number of long-standing personal relationships with administrators in his area. Taped interviews indicated that this personal familiarity was very useful in stimulating initial positive response to the program, partly because the client felt a desire to cooperate with a friend, and partly because it was not necessary for the field agent to legitimize to them his interest in and understanding of school problems on an administrative level. This field agent then relied on the principals to disseminate knowledge about the program to their teachers, a method which may be effective in the long run but failed to produce many requests in the short run.[2]

A completely different method of publicizing the program was adopted by a fourth field agent. This individual met with

---

[1] Many teachers did, however, remember the field agent's name from the letter which indicates that this effort was not totally unfruitful.

[2] At the end of the observation period, this agent was still receiving a majority of his requests from administrators.

> principals at regularly scheduled district meetings. After a brief explanation of the program, he used a "force field" technique for diagnosing a problem volunteered by one of the principals in the group. The emphasis in the presentation was on the technique of diagnosing school problems, rather than on describing the information services of the program. Consequently, it seemed to have rather poor results in stimulating an interest in acquiring information. In fact, many of the principals were rather confused by the procedure. This agent relied on the principals to publicize the program among their teaching staffs.
>
> A fifth field agent sought to meet with groups of teachers. Because of the limited time allotted for his presentations in regular faculty meetings (only about five to ten minutes), and his expressed concern for helping teachers with their "problems," he was received with skeptical caution. In one instance, a teacher who had heard his presentation reported that the group was simply amused by his presumption that he had come to solve their "problems." "What problems? Why, we don't have any problems!" was the spirit of their reaction.
>
> At the beginning of the second year of the program, both agents in one state developed publicity films which could be shown within the schools in their target areas. These films served to remind local educators about the availability of the program and to reach individuals who had not been contacted personally during the first year. Since the agents were, at this point, very busy in handling requests, they had less time to spend on individualized publicity, and this mass communication technique seemed an efficient way of generating renewed interest at the beginning of the school year.
>
> After one agent had been in the field for several months, she developed a target area newsletter which incorporated descriptions of the activities of the pilot project. In this newsletter, she listed all of the requests that had been made in the target areas over the past month. Seeing what other educators had ordered often stimulated interest in receiving the same information.

These cases highlight some of the points that may be made about the process of gaining access to school personnel and publicizing the service. Although the number of cases was small, a certain consistency in outcomes allows us to draw some tentative conclusions about the initial phase of presenting the program.

Meetings with large groups of people created a certain level of awareness, particularly among individuals who were already predisposed to use a variety of resources in gaining information. Group meetings did not, however, provide a sufficient understanding of the functions of the program and the ways in which the information resources of the program may have related to an individual educator's specific needs. Several factors may account for this. Large meetings tend by their very nature to be formally organized, and there is usually little two-way communication between the speaker and the listeners. Thus, any confusion or uncertainties about the explanation of the program often remain unclarified. Also, group members tend to be reluctant to ask questions about how such a service might relate to their own individual problems because they are unwilling to highlight the fact that they do have problems in front of a large formal group of peers. Finally, educators are probably overexposed to meetings in which new programs, projects, curriculum developments, etc., are explained and endorsed, and consequently have a tendency to listen to such material with only half an ear.

A second lesson that may be learned is that meetings with small groups of teachers (or committees) seem to be a very successful technique of stimulating interest in the program. Since teachers often have unarticulated problems or needs, informal and exploratory discussion with the field agent creates a supportive group atmosphere which stimulates thinking about ways in which they might work on these problems together. In effect, the program becomes more meaningful since the teachers can begin to relate the potential resources of information to their own common situation. Individual meetings between a field agent and a teacher or administrator serve a similar function but are somewhat less efficient for reaching a larger number of people.

Third, prior familiarity with certain individuals or school systems tends to facilitate understanding between field agents and potential clients. The total "outsider" status of the field agent is more quickly transformed into the partial "insider" status which the field agent must assume if he is to work in depth with a need or problem.

Fourth, it is unwise and ineffective to emphasize the need for in-depth diagnosis of problems when explaining the program. This diagnostic technique tends to antagonize some individuals who may understandably ask themselves why an outsider assumes that he has a better grasp of their situation than they themselves have. Also, a strong diagnostic orientation may serve to divert the attention of potential clients from the fact that information may help them with those felt needs that they experience every day.

Fifth, all of the field agents generally agree that it is important to gain initial acceptance, if not enthusiasm, from top administrators before proceeding to lower levels of the school system. A hostile Superintendent or principal can quash even the most active interest among lower level participants.[1]

A general point that deserves emphasis is that in all of the states where the field agent confronted either a large district or several districts, the process of fostering awareness was much more time-consuming than originally anticipated, frequently running into months. One reason was that the process of publicizing the program soon overlapped with involvement in working with the first requests of clients. As the agent became engaged in retrieving and discussing information with clients, he tended to postpone encounters which were intended only for trust-building. Thus, four months after the project had started, one field agent had not even visited several schools in his target area. Another field agent, who had realized early that the process of building awareness would be time-consuming, did not actively solicit requests during his initial visits, but waited until a second round of visits. This strategy took him five months. Thus, although most of the field agents have felt that gaining access was not terribly difficult (in the sense that they did not meet with resistance or lack of interest in the program in most areas), it nevertheless required a tremendous amount of time and effort.

---

[1] See the case study of field agent C-3 for a description of the difficulty of gaining access without administrative support.

Related to the above is an observation based on the experiences of field agents who initially attempted to use either written material or the grapevine for publicity purposes. Although some requests will usually result from this more indirect type of communication, it is inadvisable to rely on these methods alone if there is an interest in reaching people who are timid about using new resources. If the field agent wishes to reach those typical members of the educational system who are not aggressive innovators or self-starters, it is insufficient to wait for people to come to him for the service. Active "selling" has been recognized as a clear necessity by several of the field agents.

A final point is that initial publicity procedures are very time-consuming, and as the agent becomes more established in the target area and begins acquiring a heavy case load of requests, he will inevitably have less time to spend on intensive publicity. In such cases, he may wish to engage in more mass media efforts, such as films, newsletters, etc. Once a certain level of awareness in the schools is reached, such efforts may have more impact.

Levels of Access

As our remarks on the methods of gaining access have indicated, there is considerable variation as to how much attention is given to different groups and levels in the schools. This is not merely of academic interest, since such choices seem to reflect a number of factors in the personality of the field agent, his philosophy of change and initial relationships that emerge in each target area. Incidentally, it should be noted that the project directors themselves indicated in response to our survey of goals that they felt that both administrators and teachers should receive "top priority."

Early in the program, a short questionnaire was sent to the field agents asking them to indicate the origin of their requests over the preceding months.[1] An analysis of the distributions for each field agent revealed that the modal group of clients represented the most recent status in education held by the field agent himself. For example, the field agent who had been a district specialist prior to taking the field agent job elicited 43 percent of his requests from district specialists; the agent who had previously been a superintendent received 40 percent of his requests from superintendents; and the agent who had just left a job as a teacher received 47 percent of his requests from teachers. In observing a tendency for the agents to gravitate to individuals who occupied the positions which they themselves had held, the evaluation team cautioned the project directors against over-specialization in this respect. However, not only did this tendency fail to decline, but it was increased over the ensuing months. As shown in Table 2.1, data based on our analysis of sources of requests over a period of five months (which occurred about a year after our original survey of the agents) indicate that former teachers received most of their requests from teachers, while former administrators received most of their requests from administrators. Apparently, the tendency to seek clients among persons who occupy the field agent's former status is virtually impossible to stem. Thus, as we recommend in Part VII., a team of agents should be used in future programs, with at least one member having been a teacher and the other an administrator. Otherwise, many clients who could benefit from the service will be ignored by the agent.

---

[1] See Appendix B for a copy of this data sheet on field agent activities.

While it is possible that the field agents felt greater security in dealing with clients in their own former statuses, the particular client group was not always a matter of the field agent's choice. Often clients themselves tried to define the population that should be served. Two main trends seemed to arise in this area:

TABLE 2.1

POSITION OF CLIENTS ACCORDING TO
FIELD AGENTS' FORMER STATUS*

	Agents who had been teachers				Agents who had been administrators		
Position of clients	A-1	B-1	C-2	C-3	A-2	B-2	C-1
Teachers	79%	58%	50%	52%	36%	32%	29%
Administrators and district or intermediate specialists	16	39	47	48	59	65	71
Other (students, school boards)	5	3	3	--	5	3	--
	100%	100%	100%	100%	100%	100%	100%
N	(37)	(73)	(28)	(37)	(33)	(85)	(28)

*SEA, college and university clients are omitted.

1) When the field agent was recruited from a teaching background, he often had to overcome an assumption on the part of the administrators that his major effort would be devoted to teachers. For example, one field agent found that a Superintendent whom he visited felt that inasmuch as the field agent had little personal expertise in higher level administrative problems, his help would not be useful to Superintendents. Another former teacher reported that principals were encouraging him to work with teachers as contrasted with administrators. Both of these field agents later developed a number of contacts with administrators, but only by making extra efforts to prove that they could provide materials that would be useful to them. Sometimes this was a matter of supplying

material to an administrator even when a direct request was not made. Or, the field agent tried to prove himself by bringing in consultants with expertise in administrative matters. Again, on many occasions principals became interested in requests made by their teachers, and thereby gained insight into the potentialities of the program for themselves. In any case, it seems fairly clear that field agents who came from the lower levels of the educational hierarchy had to "prove" their usefulness to administrators to a much greater extent than to teachers.

2) A different type of problem seemed to arise for field agents recruited from higher level backgrounds. Such field agents were so eagerly accepted by administrators that they were soon monopolized by them. Naturally, however, when the field agent was dealing with several rather complex administrative problems, it was difficult to find the time to extend the service to teachers. In some cases the agents were actually discouraged from moving toward more involvement with teachers. For example, one field agent was discussing the problem of reaching classroom teachers with one of his more active clients (a district level staff person) when he was told, "I have been wondering whether you want to work directly with teachers in this district or if you want to hold only to principal contacts." The staff member then warned the field agent that he would have too many requests to handle if he began to solicit requests directly from teachers.[1]

---

[1] It may be argued that in serving principals' requests the field agent is often reaching teachers, since relevant material may be passed down. However, the nature of the requests received by the programs indicates that in many cases the felt needs of the principals and teachers are not completely overlapping.

3) Another factor that seemed to influence the levels on which field agents worked was their perception of where the leverage for educational change was located. Roughly speaking, two main philosophies emerged: one viewed the locus of change as residing in the administration; the other viewed it as residing in the teaching staff.

The first view assumed that the purpose of such a program was to produce fairly widespread or long-range projects that will affect a large proportion of the school staff in an area. A further assumption of this view was that administrators were, in general, the only group with sufficient power to carry through major shifts in educational philosophy, initiate structural changes, purchase new materials, and so forth. Thus, although requests from individual teachers were accepted it was most important to involve administrators when trying to pull together the strands of larger issues or innovations. One field agent, for example, indicated that teachers had voiced many diverse problems, but that his main task was to "determine how I can best work with that school . . . get at these specific problems and launch into a more sweeping endeavor with [the principal]." Another field agent devoted his first year to working with whole school districts on needs assessment programs with the intention of prompting Superintendents and principals to express long-range school needs that could be dealt with during the next year. A third field agent signified at the beginning of the program that what he really would like was the authority to be able to mandate changes himself--in the absence of such authority, he felt that it was important to work with those who did have it.

The second viewpoint embodied more of a "social work" philosophy --that is, while the main purpose of the program was to create change, one of the best ways to achieve this objective was to help individuals solve their own problems. Often the people with the most interest in working on teaching and curriculum problems were teachers. Principals and Superintendents tended to be very occupied with other administrative tasks, and wanted a ready-made solution to these problems. Thus, comments like the following have been made:

> My particular position or job is just to be a resource, whatever that resource is . . . my objective is to help in one area in every school in every district. . . . Here is something that I have found every time I have dealt with . . . an administrator. We are not going to get anything disseminated, as far as I am concerned, if we expect the . . . Superintendents to be the ones we are disseminating to . . . these administrators are not in key with what is happening in the classroom, and they are not so keenly concerned about getting information that will help them to do their job better . . . they're looking for magic.

Another field agent noted that she did not think that her job was that of a "change agent," but someone who should go to clients, find out what they wanted and give it to them. The same field agent felt strongly that she should meet as many needs as possible, and not get too involved with any one project.

It should be noted that none of the field agents adhered to extreme positions of either philosophy, and all of them have done some work in both areas. In fact, a major skill needed by educational field agents is the ability to recognize when different philosophies or strategies are most appropriate and to be able to shift between them as the need arises.[1]

Diagnosis Versus Acceptance of Felt Needs

In one state, as we have already noted, great emphasis was placed on diagnosing the root cause of a problem rather than providing information to alleviate the direct or indirect effects of the problem. Thus, it was expected that if the field agent found a teacher who complained about low reading levels in her classroom, he would not merely retrieve materials which might help her to improve her reading program. Instead, the field agent and the client were supposed to work through in detail the causes of the reading problem, e.g., lack of articulation between reading programs in the different grades, lack of reading material in the children's homes, too much heterogeneity in the class, etc. The assumption was that the teacher and others affected by (or helping to cause) the root problem would work on it together using materials from the ERIC resource base.

Underlying this keen interest in intensive diagnosis of school problems was the justifiable feeling that improving education was not merely a matter of patching up small rips in the fabric, but of locating basic weaknesses in the cloth itself. This would seem to be an admirable and reasonable goal for a project whose overall direction is to solve educational problems through the application of exemplary knowledge. In practice, however, because of the structure of the project and the expectations of clients, it was not always easily achieved. This was true for several reasons.

---

[1] For suggested guidelines, see Appendix G, "Developing a Strategy Based on Particular Clients and Their Setting."

1) The field agents were not trained professionals in the field of educational and organizational diagnosis. Also, as noted above, they lacked a mandate to come into the school for the purposes of intensive diagnosis. Attempts to initiate a diagnostic period under these conditions may well produce resentment on the part of clients.

One field agent initially attempted to use needs assessments as a diagnostic tool. He felt that with the results of a needs assessment, the administrators in the school districts would be aware of the major areas of concern to students, teachers, parents, etc., and also that they would have a roster of major problem areas to work on. But several drawbacks to this technique emerged. First of all, many of the principals were not enthusiastic about the idea of exposing their schools to examination by outsiders (i.e., parents and community members), and did so primarily because it was requested by the Superintendent. One principal, for example, stated that he felt it would cause a lot of problems for him administratively because "maybe kids and parents don't like what you're doing, but it's the best thing. . . ." Another objected that "people don't know enough about the schools . . . they won't have any [informed] opinion." Further, the process demanded a great deal of time--several months for each school--and absorbed most of the field agent's energies. During this period the agent had little opportunity to respond to the felt needs of these potential clients. Also, for principals who had initially evinced enthusiasm, the lapse in time between the original idea and the end product was so great that they had for the most part moved on to other problems that were more immediately pressing.[1]

As the field agents became more experienced in their work and more familiar with the schools with which they were dealing, they were able to develop diagnostic skills. Most of them agreed, however, that unless the client himself was enthusiastic about engaging in an extended study of the problems that faced him, there was little to be gained from overt attempts to change the client's approach to the situation. Indeed, the state that originally placed the greatest emphasis on locating the root problem of clients later moved to a much more flexible view which takes into consideration such factors as variations in the needs of different clients and in their acceptance of diagnostic efforts.

2) Another tactic in the diagnosis of problems was to delegate the responsibility to consultants. Although the consultants were seen as experts in areas where the field agent was not, it might be noted that difficulties still arose. In several cases, the results of such meetings were very unsatisfactory from the client's point of view. One client commented that diagnostic periods had been unproductive because the consultants had been unable to tell them anything new. Another client stated that he felt that the consultant team had been trying to give a "hard sell." In another case a field agent commented that the consultant had lots of nice theoretical ideas, but few relevant practical suggestions.

Again, it should be emphasized that success in the use of consultants during the early phases of diagnosis was highly dependent on the client's attitude toward such a step. Often there was some reluctance on the part of school personnel to call in outsiders from the State Department or from universities.

---

[1] Other aspects of the needs assessment are discussed in Chapter 4.

3) The need for quick action on a problem may make any kind of extended diagnosis impossible. (Most of the field agents seemed to feel that an in-depth diagnosis requires more than one meeting between the field agent and the client.) Many clients felt that the field agent's contribution resided in being able to obtain information regarding their felt needs much more quickly than they are able to get it themselves; thus, the speed of the service is often important. As one client stated:

> The main drawback with using state people is that when they are asked to come into the district they have to fit your request into their schedules, so that they may finally show up after the whole issue prompting you to call them has blown over. On the other hand, [the field agent] is close to the problem, he can identify them more easily . . . and he responds to problems generally more quickly.

This comment highlights a characteristic of school systems in the United States, namely, that they often operate in situations of crises. Educators frequently feel that their problems cannot wait for thorough investigation. They value the service, therefore, because it helps them get to work on a problem much more quickly than would normally be the case.

4) In the beginning of the program, the field agents often found that their main responsibility to a client was not to diagnose concrete needs or problems, but simply to get him interested in using external information. This was particularly true in the case of rural educators, many of whom were unaware of the potential resources of educational literature. Thus, some of the field agents reported that they were simply

playing the role of stimulating interest in the potentialities of the literature.

The easy availability of packaged educational material (PREP, CAT, CAP, etc.) was most helpful in this effort. Thus, as one field agent reported:

> Well, you just sit down and talk to them and ask them what subject they're interested in, even that vague, and they'll say something like counseling, and you show them that [package]--and it's so easy, you get six requests--they just go wild when they see those. . . .

Another field agent began sending out lists of available packages to people who had been relatively uninterested in the program, and found that many of these individuals who had been unresponsive to a discussion of particular needs appreciated receiving and discussing a package.

The above comments should not be construed to mean that diagnosis is not valuable within this type of program. There were at least two ways in which in-depth diagnosis was useful. First, there were many school people who were only dimly aware of their own basic problems and who appreciated assistance in articulating and in gaining a perspective on an underlying question. Second, the field agents occasionally stimulated the formation of ad hoc committees or study groups to work on specific areas. These groups themselves often gradually moved toward diagnosis, providing there was enough interest and expertise present. For example, one teacher made a request for material on individually prescribed instruction. In the course of looking over the material with other teachers, the idea of a learning resource center for the whole school developed. In another instance, the field agent facilitated the formation of a social science teachers' council for an entire county. This group was enthusiastic about looking at new developments in social science and making long-range plans.

Still another occasion for diagnosis arose when the field agents began to work with some of their clients on several problems. This situation presented an opportunity to discuss ways in which the separate problems might be related to one another. Clearly this type of interaction with clients--based on mutual trust and recognition of a certain expertise on both sides--may take quite a long time to develop. One field agent, for example, took advantage of a simple request for individualized math textbooks to stimulate a whole series of structural and programmatic changes. Although she realized from the beginning that the school was open to new programs and ideas, she introduced the possibilities of more major changes only after the school personnel had become excited about some of the material that was provided.

If immediate, intensive diagnosis is not often the best tactic for stimulating use of the service, at least some effort in specifying the problem is essential. In most cases it is important to have some contextual knowledge about the client's need if relevant information is to be retrieved. If a teacher wants information about new reading programs, it may be necessary, for example, to know what the spread of ability is in her classes, whether she is willing to look into individualized instruction, what specific difficulties in her present program motivated her request, etc. Several of the field agents adopted the strategy of obtaining quite general material (perhaps a PREP packet when one was available), and then using the requestor's reactions to these materials to help specify more precisely the locus of interest.

The importance of specification was highlighted by several instances in which an educator made a very general request, and then complained that the material returned was "irrelevant" or inapplicable to his school. By discussing the request with the client, the field agent was usually able to avoid such occurrences. Since it is very expensive to run large, general computer searches which then have to be screened for relevancy, the specification process has an impact, not only on the client-field agent relationship, but also on the efficiency of the retrieval process. This point will be expanded in Chapter 4 of this report.

In summary, opportunities for intensive diagnosis (which is not the same as specification of a request) will be affected by a number of factors. One of the most important of these is the client's trust and respect. Since good working relationships often take some time to develop, the field agent should be somewhat cautious in moving toward a long-range diagnosis, insuring first that the client is interested in such efforts and is prepared to consider seriously the outcomes and potential areas of change which are thereby illumined.

Building Trust and Confidence

The theme of building a trust relationship with clients has appeared indirectly at several points in this paper. We have noted, for example, that there was some hostility toward attempts to gain access that were too directive, that school personnel were sometimes reluctant to depend upon field agents recruited from another organizational level, and that access was occasionally hindered by colleagues in the intermediate organization who were somewhat anxious about the field agent's role relative to their own. All of these examples indicate the importance of developing relationships of trust and confidence, and also of developing a strong reputation among local educators as a responsive, involved individual.

All of the field agents in this pilot project recognized the need to build trust relationships with clients in order to overcome anxiety in revealing problems or skepticism about the benefits of the program.[1] For the most part, they were also aware that this goal could not be accomplished overnight. One field agent, for example, wrote that the first stage of the field agent's work was to

> create an atmosphere of warmth and fellow-feeling from which trust, faith, confidence and belief can be developed by the client regarding [the field agent] as a person rather than the selling of a product. . . .

Other field agents have mentioned specifically that it is important to build confidence within a whole district, as well as with individual clients if their work is to be really effective.

Most of the field agents began this task by working from the top down, even when they concentrated primarily on working with lower levels of the school personnel. In those target areas which included several districts, the field agents tried to establish with each Superintendent the ways in which they should operate in their particular district.

---

[1] This point is clearly substantiated by the agents' responses to our goals survey.

Thus, one Superintendent wanted a field agent to inform him every time he intended to visit a school in the district; another said that he would be satisfied with a monthly summary of the field agent's activities; and still another gave him a free hand and required no formal feedback whatsoever. By establishing these requirements before actually beginning to solicit requests, the field agents were able to avoid potential conflict over matters of authority and to gain administrative support later on for changes proposed by teachers. In effect, such meetings served to demonstrate to the Superintendents that the field agents had no intention of "working behind their backs."

Another symptom of the skepticism of individual educators in the districts was that several of the field agents reported that clients had made requests just "to test" the capabilities of the program:

> We're getting the feeling that when we go in and ask for requests we're getting something superficial, off the top of their heads. . . . Then, when we get back to them, that wasn't what they wanted anyway. . . .

And another:

> . . . Next year I think our requests will be more refined. People will be more honestly seeking information instead of testing the water.

A specialist at the district level made a request on a subject that he had been gathering material on for a year simply to determine whether he would get the kind of in-depth coverage that he sought. Elsewhere, a client reported that he had made a request on a topic in which he wasn't really interested just to see what he would get back. The field agents responded to this initial skepticism by noting that it was essential to produce some concrete evidence of the worth of the program early in the game. According to our case studies and observations, an early success in retrieving relevant material or in helping to solve a visible need in a district seemed to be of tremendous help in building up a good reputation.

The tendency on the part of clients to "test the water" means that the field agent cannot be too selective in accepting requests in the early stages of the program, even when he feels that requests are irrelevant, that clients are not truly involved, or that the need is not one that can be solved by research or other expertise. Each field agent answered some requests of this type early in the program. For example, a field agent was asked where to locate a book that a social science teacher wanted to use in her course. Although the field agent felt that it was not part of his role to perform such minor services, he found the book and also put the teacher in contact with the state librarian. Another agent tracked down information about graduate programs in vocational education as a personal favor for a client who planned to return to graduate school. A third agent helped a client to write a proposal for a grant that would allow the client to develop his own curriculum. After the role of the field agent has become securely established, it is much easier to indicate to a client that his request does not fall within the purview of the project.

Other sources of resistance encountered by the field agents were (1) a reluctance to get involved in more new programs of unproved worth, (2) fears that the program was just another attempt by the State Board to undermine local control of schools, (3) a sense that they were already suffering from an overload of information rather than from too little. Several of the field agents responded by trying to "tease" a prospective client with a piece of information that seemed particularly relevant to the school. Initially, however, most of the field agents attempted to work toward more productive relationships in order to get the program established locally. Another tactic was to try to gain the client's cooperation in defining the role of the field agent in the district. In an initial meeting with a Superintendent, the agent avowed that his role was not really well defined, and that he would like some help in developing it. This approach had some unfortunate consequences in that it gave the impression that the field agent himself was not sure about the purposes of the program. It also elicited some suggestions for the role that were incongruent with the way in which the role was defined by the state project. For example, several superintendents replied that what they really needed was someone to improve communication between schools within their district so that new, "home-grown" practices would be brought to everyone's attention. One of the main purposes of the dissemination program, however, was to put educators in touch with developments on the state and national level. Field agents who tried to define their functions quite concretely in the beginning of the program rather than eliciting the expectations of the client did not run into this problem.

An important aspect of developing a relationship of trust is to make the client aware that the field agent will not divulge certain information to the client's superiors. This issue goes beyond the problem of mere skepticism and is more a matter of apprehensiveness. One field agent indicated that she thought it was absolutely essential to make clear in the beginning of the relationship that the client's confidences would not be violated. And the Superintendent with whom she worked agreed that one of the field agent's strong points was that she never "tattletaled": "The teachers wouldn't accept her if she did."

A corollary of the above point is that the field agents have discovered that it is essential for them to remain "outside of politics." This was brought home very forcefully to the two field agents who were situated in target areas where a school coordinator had previously performed many of the same functions as the pilot state field agent. In both cases the coordinator had been forced to leave the district after becoming involved in infighting between various administrators. These two field agents (and their immediate superiors as well) noted that it was important for them to be discreet and not too aggressive in the beginning inasmuch as people were still suspicious of this type of role. Another indicator of the fact that the field agents believed in avoiding involvement in "political" problems was seen in a checklist of goals sent to all of the program staff. One item on the list, "[the field agent should] serve as a mediator in disputes between the State Department of Education and local schools," was rejected entirely or given low priority by all except one field agent.[1]

---

[1] The problem of staying outside of conflict areas is discussed further in Chapter 4.

A final point on building confidence and trust concerns the degree of formality in client-agent interaction. There was great variation among the field agents in this regard. Some were informal and even chatty in meetings with clients--discussing the hunting season, what they had been doing on their weekends, etc. Others tended to focus almost exclusively on the business at hand. As far as we can tell, this factor did not have any appreciable effect on the field agent's success in building trust relationships with their clients. All of the agents. however, felt that it was important to develop empathy with client needs, and not to allow the relationship to become *entirely* formal.

Conclusion

In every new social service program or pilot project there are two major objectives. The first is to establish the program and build acceptance of it among the group whom the program is to serve, while the second is to develop procedures which will help to ensure that the program does what it is supposed to do. It is clear that the second objective cannot be accomplished without at least a solid beginning on the first. The above discussion has concentrated on some of the major problems and issues in developing acceptance for the new role of the educational field agent--not because the problems have outweighed the successes, but because it is hoped that future projects of this type will be able to learn from the pioneer efforts of the first states to have institutionalized the field agent approach to dissemination of educational information.

CHAPTER 3

RELATIONS WITH THE RETRIEVAL STAFF--REFERRING AND SCREENING

To a significant extent, the roles of field agent and retrieval staff overlap. In the first place, it is not enough for the agent to comprehend the need or problem of the client--he must also be able to articulate that need so that those responsible for acquiring the right resources can understand the dimensions of the client's problem and situation. Since many requests will eventually have to be reduced to "computer language," this means that the agent should have some understanding of the parameters used for coding in the retrieval office, or at the very least some appreciation of the difficult task of reducing user language to retrieval language.

In the second place, the agent himself might try to retrieve resources, either by resorting to ERIC and CIJE catalogues or to other locally available materials and personal assistance. And finally, the agent may wish to screen, annotate or organize the materials delivered by the retrieval center according to criteria of readability, relevance and feasibility.

In short, the agent's responsibilities are by no means restricted to matters of interpersonal finesse in dealing with clients. A certain amount of clerical work and conscientious retrieval effort are also demanded of him. In fact, it would not be amiss to conceive of field agents as semi-retrieval specialists. Only by interlocking with the work of full-time retrieval personnel will educational extension agents be able to perform the task of enabling clients to absorb and implement the body of educational research and other resources that are made available to them through the vehicle of a dissemination service. The present chapter is devoted to documenting this point by reference to our observations of the Pilot State Program.

Communicating the Client's Request to the Retrieval Staff

The issue of developing adequate intra-organizational communication networks and procedures is a prominent one in the literature of organizational management. While the pilot projects are not typical of bureaucracies because of their small size and lack of well-defined levels of management, they must cope with the same communication problems confronted by any organization which is structured around a central office with geographically dispersed field offices.[1] Owing to this organizational dispersion, the communication of client requests to the retrieval staff in each of the projects was primarily through written request forms, supplemented with telephone calls and occasional letters. To a large extent, the success of the program depended on the adequacy of these written communications. Without proper specification of the client's request, the information that is finally retrieved is likely to be irrelevant or inapplicable to the client's particular needs or situation.

---

[1] Managerial problems which arose because of organizational dispersion are discussed in Part IV., Chapter 9.

As noted previously, it is the responsibility of the field agent to discuss the request with the client in sufficient detail so that certain facts may be pinpointed (such as the grade level, financial constraints, school or grade characteristics and one's motivation for the request). The field agent (or his secretary) must then transfer this information to the request form in such fashion that the specific nature of the request can be easily understood by the retrieval personnel. While this procedure appears perfectly simple and straightforward, it is inevitable that the use of abbreviated written communication will cause occasional problems.

Some of the difficulties that arose appeared to have been caused by the field agent's impatience with paper work, or his lack of understanding of the needs of the retrieval staff for certain types of information which would help them define the descriptors to be used in a computer search. In one case the retrieval staff complained that they were constantly having to telephone the field agent to ask him about the meaning of his requests since they were not self-evident from the written forms which he forwarded to them. In another case, the retrieval coordinator noted that he and his staff had felt an increasing need to get the field agents to give them more background on the client's characteristics so that they could be more helpful in screening the material after it was retrieved. This experience suggests that as the retrival staff becomes increasingly accomplished at its job, the need for well-defined communication linkages with field agents will also increase.

In another state, where great reliance was placed on packages offered by a regional retrieval center, increasing responsibility for filling out the final request forms was delegated to the field agents. In the course of meeting with clients, the field agents helped them to select appropriate titles from lists of the available packages, and then merely sent these titles and numbers to the regional service. After a short period, however, the regional center personnel requested that the field agents send a record of the request itself for record-keeping and evaluative purposes. When they began doing this, it was discovered by the retrieval center that the packages selected by the field agent were not always the most relevant to the client's problem. It seems that inasmuch as the field agents and the clients were not completely familiar with the contents of all the packages, often they were compelled to make their selections on the basis of the general subject areas that were listed. The regional center therefore requested permission to change or add to the packages requested by the field agents when they felt that other material would be more suitable. The head of the retrieval unit reported that substitutions were consequently made in a substantial number of cases.

When in-depth searches as distinct from pre-packaged material were requested, the retrieval coordinator in the state mentioned above often attempted to supplement the computerized material from her own subject matter files. In general, she found it necessary to call the field agents on the telephone when this type of request came across her desk as the information routinely provided on the request forms was inadequate to steer her in the proper direction for a search. In short, the frequent need for clarification of requests suggests the possibility of increased communication problems as the service expands and more searches-in-depth are requested. While clarification by telephone is adequate at the present stage of project development, it would certainly be difficult (and would most likely slow down project operations) if it were necessary to make individual calls concerning twenty or more SIDs per week.[1]

In still another state a great deal of emphasis was placed on getting specific delimitations of the parameters of a request, such as the target audience to which the material was to be directed, the grade level of the request and characteristics of students and schools when relevant to the request. There were apparently very few communication problems in this state although, again, the telephone was used frequently to discuss specifics with field agents. In general, however, the request forms contained more detailed information which presumably aided the retrieval staffs in completing a request.[2]

In summary, although the process of communicating the request from the field agent to the retrieval staff has not been a major problem in any of the three states, the process is by no means a simple one.

---

[1] A little more than a year after the projects had begun, two states were handling about 12 SIDs per week while the third was handling about six per week.

[2] Information contained in the request forms is analysed in Chapters 7 and 13. A "model"request form is presented in Appendix F.

Problems which have emerged have been primarily a result of failing to anticipate the kinds of specific information needed by the retrieval staff.

In order to avoid problems in this area, we would recommend that the nature of retrieval needs be carefully explained to the field agents before they go into the field.[1] In one state which was training information go-betweens in the schools, a small brochure drawn up by the retrieval people was also found to be helpful. This brochure set out in detail the kinds of parameters that should be put on the request form in order to ensure accuracy in the search process. While frequently the telephone is useful, and essential in the case of requests that are unusually complex, it is preferable for the conservation of time and money to develop requests forms which stimulate the field agent or individual client to answer routinely certain types of question about the request.

Centralization vs. Decentralization of Retrieval Activities

As the program has developed, the field agents have naturally begun to accumulate in their own offices a certain amount of information from previous requests. Furthermore, they have become familiar with the local reservoir of resources in the form of innovative school personnel and local colleges or universities. Several of the field agents were located in intermediate agencies (or districts) which gave them access to preexisting files on various subject matter. Thus, it is to be expected that some requests that are received may be handled locally, either in conjunction with a retrieval search or in place of one.

---

[1] In the present pilot program, the retrieval staff were learning the proper procedures for retrieval of information at the same time that the field agents were learning their role.

Even in the early months of the program, the agents handled a significant proportion of requests with local resources or by referral to someone besides the retrieval staff in the SEA. According to a survey of the agents, conducted in about the third month of work, the following proportions of requests were handled without referral to their retrieval offices (see Table 3.1). Only one of the agents asserted that none of his requests had been handled without referral to the retrieval staff. At the other extreme, field agent B-1 indicated that almost half of his requests had been so handled.

TABLE 3.1

PROPORTION OF REQUESTS NOT REFERRED TO THE RETRIEVAL STAFF (EARLY IN THE PROGRAM)

	State A		State B		State C		
	1	2	1	2	1	2*	3
	8%	--%	48%	10%	17%	25%	7%
N	(52)	(28)	(25)	(20)	(175)	(80)	(150)

*Original field agent, later replaced by another agent when he moved into SEA job.

The frequency of answering requests by some means other than referral to the retrieval staff is explained neither by the length of time that the agent had been working in the field nor by the type of clientele in which the agent specialized. Agent C-3, who had been working for some time, was as unlikely to handle requests by himself as agents A-1 and A-2 who had been working a much shorter time. And those agents who specialized in serving teachers included B-1, who frequently handled requests himself, as well as A-1 and B-2, who rarely did so.

We also obtained information about how such requests were actually handled. In our questionnaire, we gave the agents five alternative procedures and instructed them to indicate how often (frequently, sometimes, rarely, never) they had pursued each of these alternatives. As shown in Table 3.2, the agents most often "handled the request myself (e.g., gave advice, used ERIC abstracts, recommended a book or article.)" Two agents did so frequently and three agents sometimes. Second in order of occurrence was "referred client to someone in another school who had information about his need or problem." All except two of the agents sometimes encouraged this kind of lateral communication. Third in order of frequency was "referred client to an expert in a college or university (other than an R & D Center)." Finally, only one agent referred a client to an R & D Center or lab sometimes, while two agents did so rarely. In sum, frequency of handling requests not sent to the retrieval staff descends from the agent himself, to other schools, and finally to university and SEA experts. This sequence represents an expanding circle of reference from strictly local to more cosmopolitan sources. When the agents handled a request without referral to the retrieval center in the early months of the program, therefore, it was clearly not a matter of their referring the requests to outside experts.

TABLE 3.2

FREQUENCY OF HANDLING REQUESTS NOT REFERRED TO THE RETRIEVAL STAFF (EARLY IN THE PROGRAM) IN VARIOUS WAYS*

	State A		State B		State C		
How requests were handled:	1	2	1	2	1	2	3
Was able to handle the request myself (e.g., gave advice, used ERIC abstracts, recommended a book or article or other information)	S	-	F	(1)**	F	S	S
Referred client to another school	S	-	S	N	S	N	S
Referred client to university or college expert	S	-	N	(1)	S	R	S
Referred client to R & D Center or lab	-	-	S	N	R	R	N
Referred client to SEA expert	-	-	R	N	S	N	R

---

*Letters in table represent Frequently, Sometimes, Rarely, and Never.

**Only two requests of this agent had not been referred.

The tendency to provide the client with local resources raises the spectre of short circuiting the retrieval of validated or exemplary information from the national pool of expertise. Because the agents were far removed from the retrieval center in the SEA, it would not be surprising if they tended to inflate their roles in an effort to overcome a sense of marginality in the target area. (The problems of marginality that arise in this type of dispersed organization are discussed at several junctures in the report.) One way to inflate one's responsibilities is to take greater initiative in serving the client. It seems doubtful, however, that initiative in the retrieval of information is as valuable as initiative in helping the client to interpret or use information. Under certain conditions, the former might actually be detrimental to the goals of a dissemination service. The advantages and disadvantages of localized retrieval will be discussed more fully below.

The three states varied considerably in the degree to which they encouraged decentralization of the project. The most centralized project was that of State A, as already suggested by the fact that the agents located there almost always referred requests to the SEA retrieval staff in the beginning of that project. The major variables affecting centralization seemed to be the relative emphasis on the use of packaged materials, the capabilities of the retrieval staff, and the specificity of requests.

One of the states, as mentioned previously, depended heavily on the packaged material available from a regional retrieval center. The field agents often used the lists of available packages to solicit requests from prospective clients, a procedure which was endorsed by the project director as the best means of getting large amounts of information into the schools. In a team meeting several months after the commencement of the project, the director told the field agents that part of their responsibility would be to distribute the lists of packages among their clients and to encourage them to make orders in those areas that interested them most. As the director pointed out:

> Every time someone requests one of these current awareness files [a series which is updated with new abstracts every quarter] your secretaries should make a note of it and send them the next one on that subject when it comes out.

The topical nature of the packages makes it very easy for the field agent to anticipate areas of interest to clients, and to back-order large numbers so that he will have them available as he makes his rounds. Further, the packages (or parts thereof) can be duplicated in the local office, making it unnecessary to submit a formal request every time that a client expresses a desire for one of them. One client noted that "all of my teachers are looking for something like this," so he went to the intermediate agency and asked them to duplicate 50 copies of a single PREP kit. The retrieval coordinator, for her part, distributed a full set of the PREP packages to the field agents so that they would have them on hand.[1]

Regarding the effect of retrieval staff capability, the retrieval personnel in this decentralized state consisted of one person who shared a single full-time secretary with the project director. Thus, she had little help with the more routine aspects of her work. Consequently, a decision was made to delegate part of the retrieval task to the field agents and their own secretaries. When a field agent received a request, it was his responsibility to consider the best means of filling it, i.e. by package, search-in-depth, technical assistance, etc. One of the alternatives was an "instant search," for each field agent had in his office RIE and CIJE indices. If this method was chosen, the field agent himself looked up references under the appropriate descriptors. The secretary then typed the references onto the retrieval form, which form was then submitted to the state office. The microfiche of the whole document could then be pulled from the files in the office and sent out immediately. On the whole, however, the field agents did not seem to have used this method of filling requests with great frequency. One agent complained, for example, that the office secretary was not well trained at looking up the ED and EJ abstracts, and also that she had little time to do so.

---

[1] In subsequent chapters, we suggest that State C went too far in the direction of becoming a packet-order service.

Even when the "instant search" was not selected, that the field agent helped to make the initial decision of how the request should be filled involved him in the retrieval process to a greater extent than in the other two states. Despite this partial decentralization, the retrieval coordinator noted that few requests could be handled locally in their entirety. In most cases, the local material was backed up with some use of the regional retrieval center, even if it was only to provide a package that was not on file in the field agent's office.

The other two states were considerably more centralized, although there were differences between them in this respect. The most centralized of the states (State A) had no access to packaged services. As our above discussion of the state indicates, the use of packages to answer all requests of a general nature tends to lead to the storage of at least some of them in the field agent's office, and hence to local retrieval. Also, this state had the largest retrieval staff (at present 4 professional-level individuals involved in full-time retrieval) and was thereby able to devote considerably more time to each request. (As we will see later, the modal method of answering requests in State A entailed a combination of manual and computer searches.) Although they were sometimes able to fill requests by using material retrieved for a former client, most of the requests in this state still tended to require at least some new search process. Still, despite the absence of a formal policy which advocated local retrieval, in some cases local retrieval occurred there as well. For example, a field agent received a request for classroom bibliographies on Black literature. She knew that the other field agent had been working on a project of this nature with a teacher in his target district, and therefore telephoned to get the information rather than going through the more time-consuming process of requesting a computer search. This particular field agent also had easy access to a local university and on occasion used the library to find specific articles for clients.

The third state fell between the two states discussed above. Although there were some indications that the field agents planned to build up their files of local resources (and were encouraged in doing so by a moderate use of pre-packaged material), the retrieval staff was able to make decisions about how requests were to be filled without field agent help. Since the project did not have a budget for the reproduction of packages, PREP packages went out on loan only when a specific request was made for them or when the retrieval staff felt that they were the best way to address a client's need.

The degree of decentralization of the retrieval process has clear implications for both the role of the field agent and the organization of a dissemination service. An attempt will be made below to outline some of the major issues in this area.

(1) There are certain benefits to be derived from partial decentralization under optimal conditions. Given a field agent who has a reasonably good idea of the client's needs and interests and of the available material (in particular, packages of the most frequently requested material), local storage and retrieval can greatly speed up the turnaround process. Whereas the elapsed time between the submission of a request and the client's receipt of the material was rarely less than two weeks when a centralized in-depth search was run, local searches frequently received either same day or next day service. When the client's interest is high or the need is pressing, this is clearly an advantage.

(2) Another distinct benefit of using local retrieval for some types of easily reproduceable materials concerns expense. With the exception of the state that was still using the regional retrieval center (which charged a flat yearly fee), the cost of searching was at least $7.00, not counting the time spent by SEA personnel in clerical, screening, and packaging operations after the material came back from

the computer (the estimated time for this in one state was 45 minutes).[1] The cost of reproducing particular abstracts or packages locally would clearly be lower than this. One might object that the types of materials which are worth reproducing in bulk will seldom answer the specific questions that an educator may have on a topic. The use of such material, however, could lead to greater specificity when ordering a computer search later on since it may help the educator pinpoint in his own mind more exact topics of interest. To a large extent, this outcome will depend on the field agent's followup.

(3) A potential drawback of reliance on field agent retrieval is that it requires the field agent to be much more knowledgeable about the data base in educational research than would otherwise be the case. In order to make a reasonable selection among the various types of information which might benefit the client, he must be considerably more familiar with resources and materials in ERIC, CIJE and the contents of the packages than was true of most of the field agents in the pilot project. This conclusion is supported by the fact that the regional retrieval center sometimes found it necessary to substitute the packets requested by the field agents located in the most decentralized state. In order to reach the necessary level of expertise, extensive training and periodic updating of knowledge would be necessary. Requiring the field agent to handle such responsibilities in addition to those he now carries could produce serious overload problems, unless of course the

---

[1] The cost-per-search has since been reduced in one state to below six dollars.

number of educators serviced by the field agent were to be reduced. The fact that the field agents in the most decentralized state did not use the "instant search" method with great frequency indicates that they had little time to do so.

(4) A serious problem concerns the basic objective of an educational extension program. The assumption underlying the present program was that there was a need to tie educators into a national data base. Localizing the retrieval process through the accumulation of hard-copy material on file might reduce the impetus to move out to this more remote but probably superior and more up-to-date data base. (On the other hand, the possibility of using remote terminals hooked up with regional or computerized national sources may lessen future needs for large-scale, centralized retrieval.) Since present programming systems for ERIC and CIJE retrieval are somewhat cumbersome and difficult to use, there are experimental programs being tested which would make local retrieval possible. Such retrieval, however, would not substitute for the valuable services performed by a retrieval staff with extensive knowledge of potential consultant services inside and outside the local State Department of Education, with new projects or curricula which are being developed at the U.S.O.E.-sponsored regional labs, and so forth. Again, it is difficult to see how the field agent could be expected to keep in touch with all of these resources in addition to the duties which have been thrust upon them without intensive and recurrent training.

In summary, given the present situation, we would support decentralization only to the extent that it leaves open the possibility of delivering some material very rapidly to certain needy clients and in anticipation of other materials to be obtained through a centralized retrieval system.

Screening of Material by the Field Agent

All three of the states did some screening and preliminary reading of the information before delivering it to the field agent or client. For the retrieval staff, this is useful for gaining firsthand knowledge of the quality and relevance of the material for future reference. In many cases the field agents also scanned the material before delivering it to the client. Although the project directors did not insist on this procedure, the agents found that it was helpful in establishing their role with certain of their clients. Familiarity with the material signified an interest in the client's request on the part of the field agent, and also allowed him to discuss the ideas embedded therein.

In a sense, it is essential for the field agent to be familiar with the data if he is to move beyond the role of conveyor toward a more catalytic or change agent role. Knowledge of the information base, as well as of the client's problem, will make it possible for him to help the client in deciding which steps to take next, what options are available, what further provisions are required, etc.

There are two primary functions of reading the material aside from simply gaining knowledge of what it is about. The field agent may do additional screening of the material beyond what was accomplished by the retrieval staff. Since the retrieval staffs varied in size, and therefore in the ability thoroughly to screen all material, the need for this type of activity varied from state to state. Typically, however, the field agents reported that they screened the information for relevance and feasibility. As one field agent noted,

> . . . if we're working with an entirely white school population, and if we receive maybe four, five abstracts concerning Negro schools, unless I can see that the program being used there could be incorporated [in our situation] I may note on there, 'I question the value of this,' or 'this has no value whatsoever.'

Another field agent, however, noted that he did not edit unless the package of material returned was exceptionally large.

The other function performed by reading retrieved material was to direct the client's attention to points which the field agent felt were particularly important or telling. Most of the field agents used a pen or marker as they read and made notes in the margins or underlined sections or lines.

In State A, where the clients received lists of titles of journal articles as well as abstracts, a field agent noted that she read all articles requested by a client before delivering them:

> I read it every single time. . . . What I do is read every one of the abstracts; and then we prepare a format for them, listing the articles that we think are particularly relevant and that they might want to look at . . . after the information comes back to me from them saying that they want to see so many journal articles and so many abstracts, then I never take that . . . back to them without reading it. That's a never.

It should be recognized that the field agent (or retrieval staff) has a great deal of control over what the client actually notes. Unless the client is especially devoted and exceptionally skilled at reading research materials, his eye is likely to drift to the items or articles marked by the field agent or retrieval staff. While this outcome is probably an advantage--and a number of clients remarked that the field agent's comments were very helpful--there is some danger in having a person who is not an expert in the topic screen and edit material for another person who is also inexpert. One field agent who was aware of this problem pointed out that the danger is greater when the primary source of material is abstracts rather than hard copy:

> Those abstracts are sometimes pretty hard to read . . . sometimes the client will ask me 'what does this one mean?' and I will have to answer that he got just as much out of it as I did. They really just don't give you enough information in them to be able to judge.

A field agent in another state who was also sensitive to this problem noted:

> Once in a while, when I take the complete journal article back to them, I will say that 'this looks particularly interesting.' . . . But I don't want to lead that client in the direction that I think is right, so I don't hide complete journal articles. I hide only abstracts or the [journal titles] that I think wouldn't help. But they usually see that themselves without any influence from me.

The main drawback to fully perusing all material is the amount of time required. Especially for those agents who cover a large area, or who have a large audience of potential clients, it becomes difficult to go over all of the requests with care. Since the field agents did not maintain the same case load in every month, the amount of reading material sometimes became unbearable. One of the agents noted this problem early in the project, saying:

> I generally try to make time [to read] I would say ninety per cent of the cases. . . . Now I don't know that I'll always be

> able to maintain that. I think the time will come when that percentage will drop lower and lower. . . .

Another field agent noted that he solved the overload problem by ignoring abstracts on any topics with which he was unfamiliar. Thus the field agent is drawn involuntarily into a conflict between selectivity and quantity in helping clients. If he insists on reading all the material, he will have difficulty handling case loads which increase every month; if he does not read the material, he may be less well equipped to assist the clients.

It should be noted, finally, that a complete lack of screening may produce situations which damage the reputation of the project, particularly when it is just getting off the ground. A certain percentage of searches inevitably produce material which is not relevant to the question asked by the client.[1] If such material is simply delivered without explanation, the client's faith in the service is likely to be subverted.[2] Others who receive valuable information may be disconcerted by the apparent bulk or lack of organization in the material, and especially when there are a number of abstracts. Once, when a field agent delivered materials to a client without sorting it into areas of separate requests, the client was left confused. ". . . This sorting would have been very helpful to me," said the client. "It would be helpful to have the field agent screen information when the request is very specific, but I don't know if [the field agent] has the expertise to do this. . . ." Other clients commented as follows:

---

[1] A questionnaire sent to users of the service revealed that 12 percent of the clients in State A 19 percent in State B and 20 percent in State C felt that at least some of the material that they received was not relevant to their problem. This is, of course, after screening.

[2] This is probably less likely to occur in states where the retrieval staff screens intensively, but cannot be completely avoided.

> Of fifty-four original abstracts received, only five were applicable to my study--a waste of time sorting through all these abstracts. . . . I realize the gigantic problem involved here, but with the present system the frustration of reading and sorting so many abstracts that have nothing to do with a person's study is quite irritating.
>
> The material was too burdensome to get through. . . . When a teacher needs assistance, they need it [in a] concise form and fast . . . too much junk was involved.[1]

Thus, even in cases where the field agent does not have the time to read thoroughly all of the retrieved output, it is probably a good idea for him to glance over it briefly as a safeguard against the reactions cited above.

---

[1] Comments were obtained from questionnaire.

CHAPTER 4

THE OUTPUT INTERACTION PHASE--
DELIVERING AND ASSISTING

As the agent moves into the output interaction phase with clients he is presented with the opportunity, and frequently with the necessity, of shifting from the roles of messenger and retrieval specialist to those of interpreter and change agent. The groundwork for this shift might have been laid during the input interaction phase, depending upon the understandings that were reached between the client and agent about the latter's future role. Quite often, however, it is impossible to anticipate the degree and type of involvement required of the agent before examining the information delivered to him by the retrieval staff. As the agent begins to explore alternative solutions with the client based on the information at hand, new considerations are brought to the fore. Such questions as the following almost inevitably arise: who should be involved in decisions, how should authorization be obtained, what organizational or social constraints need to be taken into account, what resources are available or need to be mobilized, and so on.[1]

---

[1] For a set of brief, useful guidelines to the practical decisions that have to be made when considering the installation of a new practice, see Innovations Evaluation Guide, The Center for Vocational and Technical Education, The Ohio State University, 1972. The research on which the guide was based was conducted by William L. Hull and Randall L. Wells. An early version of the guidelines was submitted to the Pilot States for commentary and assistance in their further development.

Answers to these questions will often influence the style and depth of follow-up activities. In short, with the delivery of information a new social situation emerges, and therefore a new mode of interaction with clients must be sought--providing that the agent wishes to go beyond his former responsibilities as messenger and retriever. It is at this point that the value of the agent's repertoire of skills begins to pay off.

Shifting from one basis of interactions to another, however, is beset with difficulties. First, there is the seemingly trivial question of whether the agent should deliver the information in person. As we shall see, this is an extremely important matter. The way in which delivery is handled may affect the whole future history of the agent-client relationship. Several solutions were tried under different circumstances, and these are described in the present chapter.

There is also the critical question of the extent to which the agent should intrude himself into the client's deliberations or situation. There are many pressures acting on the agent to push him in the direction of either under-involvement or over-involvement. Unless he remains alert to these pressures, he runs the risk of behaving in an erratic, opportunistic fashion which will defeat the purposes of the program. Thus, decisions about how deeply to become involved and when to withdraw have to be made quite carefully on the basis of certain considerations spelled out in the present chapter.

Every decision to participate with a client in bringing about change must be weighed against the loss of time spent with other clients, real or potential. Given the omnipresent problem of overload, when becoming heavily engaged with a particular project the agent must constantly bear in mind his duties to other school personnel. This brings us to a discussion of the dilemma of quality vs. quantity of service, and one of the most interesting findings presented in this chapter concerns this problem. Based on the responses of clients to our questionnaire, we are able to demonstrate that under conditions of heavy case loads, output interaction is more likely to suffer than input interaction. In particular, it is the "implementation" activities of the agent which tend to be jettisoned when case loads become burdensome. We therefore discuss several methods worked out by the agents to deal with problems of overload.

While the chapter focusses on problems encountered in the output interaction phase, a final summary section is devoted to solutions, again drawing on the efforts of the agents in the Pilot State Program to cope with their difficulties in an effective manner. One of these solutions--delegation of certain responsibilities to school personnel as a means of reducing overload--has radical implications for an extension service and should be pursued with utmost caution. What needs to be kept uppermost in mind is that the field agent's repertoire of roles must be safeguarded against tendencies towards delegation and specialization. To our mind, the extension agents in the pilot project were successful precisely because they were able and willing to shift from one role to another as circumstances dictated.

As we phrased it in our introduction, it was the information role that legitimated their presence and activities, but it was the change agent role that got things accomplished. Without the former role, the latter is unlikely to be performed, for the role of information specialist not only helps the agent to gain credibility with clients, but permits him to do so *without posing as an expert*. The common resentment and skepticism toward outside experts, and especially toward state education personnel, is neatly circumvented by this arrangement. In effect, *substantive expertise is separated from the person*, thereby eliminating (1) the agent's identification with poor information, and (2) any status differential between agent and client which might threaten their relationship. The agent, then, is able and often encouraged to participate in the planning and implementation of change on a basis of collegiality and trust.

It might be helpful if the reader looked at certain of the case studies in Volume II to supplement his reading of the present chapter. Many of our conclusions are drawn from these in-depth case studies, which are referred to throughout; and although we have sought to reflect the concrete circumstances of the case studies when using them for illustrative purposes, it is inevitable that some facts are omitted. In particular, the full sequence of events is impossible to convey in a chapter which is analytical rather than descriptive. For this reason, it would be advisable to read the case studies of the field agents before proceeding to the subsequent sections of Volume I. (Part III.) on the process of information retrieval.

Deciding About Initial Follow-Up

At the outset there was some dissensus among project staff over the best way to deliver material to clients. Some agents felt that it was advisable to deliver the material personally and also to discuss it, at least briefly, at the same time. Others agreed with the importance of personal delivery, but felt that an appointment should be made to talk about the contents at a later date, thereby giving the client some time to look over the materials. Still others felt that it was not essential to deliver the material in person, although they agreed that in general an appointment should be set up for future discussions. Here are some comments of the field agents bearing on these different viewpoints:

> I favor returning it personally. I have, on occasion, when there has been a rush situation for the information, returned it by mail . . . on most that I have sent out by mail, I have always tried to be out in the district within the following two weeks and check in [with the client] . . . .
>
> I return the material personally . . . mainly because you have an opportunity to communicate with the individual. The client has to establish some trust in you . . . before he will use your product or believe in it . . . then the product itself will take on a different meaning and it is easier to fit a request to the client's needs.
>
> It depends upon the material. Sometimes material which I have returned [personally] I could have just as easily have mailed, but generally I have had some reason to be in the area. And again, I think that this is important: you can see the client, fine, and if you can't, in some cases it doesn't make any difference . . . I had a request recently for [a catalogue of articles in vocational education] . . . I just sent him the catalogue. It was very clear that he didn't need my thinking that over. It would have been stupid for me to make a trip . . . to talk that over [since it was an area that I knew nothing about].

Clients themselves also varied in their expectations. A number of clients mentioned that discussing the material with the agent at the time it was delivered serve to motivate them to read and consider the material sooner:

> I like to have things returned personally. If I have a stack of papers to correct and I get [information] in the mail, it would get pushed aside . . . .
>
> I have too much paper work. If [the material] were by mail, I would be prone to let it slide. You need the personal contact. I become enthusiastic as I talk [to the field agent] . . . it's mainly psychological.

Another factor mentioned by some clients is the timesaving aspect of discussing the material with the field agent. A busy principal reported that he was extremely impressed with the fact that the field agent was well prepared to discuss the materials with him, and that he appreciated this because it saved him the time of going through all of the materials in detail. A teacher reported that "it shortened the time for mulling over to have [him] there"; and a Superintendent remarked that he was happy that the agent had taken the time to synthesize some of the material and to go over it with him, since this allowed him to go to a Superintendents' meeting that same day and make a brief report on the ideas.

In the early stages of program development, and for first users of the program in particular, personal delivery (or an early scheduled return visit) is important to explain how to use unfamiliar research materials, and to describe the follow-up services available through the program. A number of first users who did not receive this kind of personal explanation reported some confusion and dismay. A teacher who received a CAT package in response to her request for materials for use with an exceptionally bright kindergarten student stated that she had absolutely no idea of how to use the material provided to her. Another client indicated that he had found the abstracts interesting, but wanted to read the articles in their entirety and did not know where to find them. No one had yet explained to him the possibility of ordering microfiche of the entire documents. In another case, a client commented:

> I was a little surprised that I got one packet of material and that was it . . . it would have been better if I had been told what to do next . . . from the outset I would have understood more about it if I could have seen samples of the material [described in the packet].

Another client, who received material that was inappropriate to his problem, remarked:

> I felt that . . . maybe that [was] as far as the program was supposed to go. I didn't see the point in pursuing it further. However, this lack of information on my part on the full extent of the program may have caused this . . . I didn't know it could be pursued any further.

As the program developed, and the field agents became more involved in dissemination and utilization, it became increasingly difficult for them to deliver all materials in person. This problem was especially burdensome for those agents who covered large territories. As a result, a number of agents reported that when the client was in a rush and needed the material immediately, they would send it out by mail, sometimes without even reading it. One field agent who delivered everything personally during his first year noted that this procedure will become less necessary as people become more familiar with the program. Later, this agent began to make exceptions to his policy of personal delivery when he felt that the client was sophisticated in the area of the request and in using research.

Another field agent reported that he had begun to send out material by mail when he felt that there was little he could do to clarify or expand on the ideas presented therein. Our observer described his procedure as follows:

> If his only input in returning material is to guide the client through the format of the abstracts and show him how microfiche is used, and if there is someone in the building who has had this experience, and if he is pressed for time, he is likely to mail it out with a personalized memo instructing the client to seek aid from this experienced person and to call him if any additional help is needed.

This particular field agent noted that initial output interaction with a first-time user was not usually substantive, but dealt primarily with the technical aspects of deciphering ERIC numbers and other practical aspects of the information. Therefore, delegation of this responsibility to an enthusiastic user within the building will provide substantially the same service.[1]

It should be observed that not all clients felt that personal delivery was important. One client, who had had considerable contact with the field agent, was asked whether it would have made any difference to him if the material had been delivered by mail, and he responded in the negative. Another user commented that it would be nice if the field agent could provide initial interpretive comments about the material, but he doubted that this was possible in the case of requests like his own, which were on a relatively specialized topic.

---

[1] The above discussion touches on one of the major issues in the field agent role, namely, overload. The general problem of overload in the output phase, and field agent solutions to the problem, will be discussed in detail later in this chapter.

Thus, there is no ready-made solution to the question of whether the field agent should strive toward personal interaction in the initial delivery of materials. Some clients were deeply appreciative of the "personal" touch in this area, while others found it unnecessary.[1] Thus, one aspect of learning the field agent role is to become familiar with the characteristics of clients and of requests which are most likely to call for personal interaction. This learning process may become an important time-saver for the field agent, since there is little point in driving many miles for the sole purpose of personal delivery to a client who wishes to spend only a few minutes with the agent.

Our qualitative observations and case studies indicate some factors which should be considered by the field agent in resolving this question:

1) In the course of defining the problem with the client, the agent may probe about the client's desire to have the material delivered personally. While direct questioning may not be sufficient to assess this completely, some clients have feelings or assumptions about the issue which could be teased out. Naturally, it is also important to clarify with the client the possibility of his initiating follow-up assistance even in cases where he does not desire personal delivery of materials.

---

[1] A large number of clients who answered the user questionnaire volunteered the information that it had not been necessary for their purposes to have any detailed follow-up interaction with the field agent.

2) The nature of the client's request may affect the need for personal interaction. Two factors which might help to define the nature of the request are a) specificity of the request and b) scope of the need or problem.

a) Specificity of the request. Requesters may have a variety of purposes in making requests, including a desire to update personal information on a topic with which he is already familiar, to elaborate on specific solutions to a well-defined problem, or to search for a variety of possible solutions to a felt need. In general, it is reasonable to expect that the client who knows exactly what type of material he needs will be less likely to require the interpretive services of the field agent than those who are unsure of the desired outcomes.

b) Scope of need or problem. The scope of the request may range from relatively small (e.g., teaching techniques to be used with individual children) to massive (e.g., plans to reorganize pupil testing and evaluation throughout a district). While we would in no way claim that requests of small scope are less important than those of larger scope, these requests may involve fewer problems in decision-making and implementation, and thus require less technical assistance or consultative help at a later stage. On the other hand, the "personal touch" in delivering materials may be more necessary with classroom teachers who are unaccustomed to dealing with technical information, while disdrict level staff may be better able to handle the materials alone.

3) Characteristics of the client and his organization may have considerable impact on the need for intensive output interaction. Client

characteristics which would be salient here are: expertise in the area of the request, general motivation to innovate as indicated by past innovativeness or present enthusiasm, "power" in the system or ability to make the changes which are felt to be needed, and general professionalism. Likewise, school or district characteristics which might signify lesser need for follow-up activities would include past innovativeness and general support of experimentation, the relative formality or informality of the system and strength of administrative support.

4) Characteristics of the material. Some of the material available through the retrieval center was relatively easy to read and use (PREP kits, full articles, etc.), while other material tended to be more difficult, particularly for the requester who was not familiar with research abstracts. Where material appears to be readable and clear, the field agent's input may be less important.

5) Field agent familiarity with the topic. When requests are made on topics with which the field agent has absolutely no familiarity, it might be wise not to devote the effort required to familiarize himself with the area. If, for example, a request is made on small group counseling techniques, and the agent has no knowledge about developments in counseling, it is unlikely that he will be able to add insights which will be of great benefit to the requester. This factor should probably be taken into consideration only under conditions of severe overload, however, since reading and helping with materials in areas where he lacks knowledge is one of the ways in which the agent himself can keep up-to-date with new educational developments and concerns.

Appendix G , "Developing a Strategy Based on Particular Clients and Their Setting," should give the future field agents some useful hints on how to determine which clients or schools will require more time in follow-up.[1] The following table illustrates a few additional possibilities of using easily available information to make such a logical determination.

A SAMPLE CHECKLIST FOR DETERMINING
THE NEED FOR PERSONAL FOLLOW-UP

	High	Medium	Low
School Characteristics:			
Innovativeness	___	___	___
Participatory administration	___	___	___
Likelihood of administrative support	___	___	___
Client Characteristics:			
No desire for output interaction	___	___	___
Innovativeness	___	___	___
Professional orientation	___	___	___
Relative power or leadership in the system	___	___	___
Expertise in the topic	___	___	___
Characteristics of the Request:			
Scope of the request	___	___	___
Specificity of the request	___	___	___
Characteristics of the Material:			
Readability, comprehensibility	___	___	___
Field Agent's Lack of Familiarity with Topic	___	___	___

---

[1] The strategy dimensions in Appendix G also refer to input interaction and type of material to be retrieved. Here we are chiefly concerned only with output interaction.

The field agent can mentally run through a list of this kind and make checks along the high-low continua. A large proportion of checks toward the high end of the scale should indicate that it is unnecessary and perhaps undesirable for the field agent to become heavily involved in output interaction. Many checks toward the low end of the scale would indicate that the field agent should definitely begin to involve himself as soon as the material is delivered.

It should be emphasized that deciding against intensive immediate follow-up does not eliminate the need for at least some interaction with clients at a later time. At the very least, it is important to keep track of clients in order to stay up-to-date on what is happening as a result of the program. In other cases, the field agent may find that an initially non-problematic request has been expanded or changed its direction, and therefore that he should reevaluate the need for assistance. Continuous follow-up also allows the agent to assess his own performance, and to feed back information about the usefulness and validity of various types of retrieved material to the central staff. Without any follow-up whatsoever, the role of the field agent becomes limited to that of a mere courier. (Many examples of the value of follow-up are provided in our case studies, Vol. II.)

While the project staffs, the training team, the U.S.O.E. and the evaluation team were all aware of the importance of follow-up, the development of adequate and efficient follow-up procedures had its difficulties. In the first section of the following discussion we will outline some of the problems which emerged during the first year and a half of program operation, and will then proceed to detail the solutions which were developed by the field agents in order to deal with these problems.

Problems in Follow-Up

Under-Involvement and Over-Involvement

If there was some initial confusion among the field agents as to the best strategies for gaining access and acceptance in client systems, uncertainty about involvement in follow-up or implementation activities was even greater. While all three of the directors felt that the field agent role should focus on getting requests and delivering material, there was considerable disagreement about the degree to which the agents should be involved in the client's utilization of materials. As noted in Chapter 1, "Goals," all three directors felt that the field agent should actively help the client to interpret materials received from the retrieval center and to implement new practices or programs. But in response to another item, two of the directors noted that they wanted the agents to encourage schools to adopt new practices "without becoming actively involved in implementation." Also, two directors (not the same pair) espoused the idea that the field agent should help to facilitate field trials of innovations, while the third stated that this was of lowest priority.

The agents too were initially unclear about this aspect of their role. One of the seven agents marked on the Goals Checklist that becoming involved in implementation was top priority, while another felt that it was not part of his role at all. The latter agent felt that he should help clients only after they had made the decision to innovate and then refer them to appropriate experts. Other responses to goals concerning output activity indicated that the field agents had only a vague image of what was expected of them in this domain.

The field agents were well aware that output involvement was a provocative issue in the program, since there was considerable debate about it at the first training session. One of the project directors objected strenuously to the use of the term "change agent" because he felt it denoted too much directiveness on the part of the field agent in making clients utilize material. Another project director felt that the field agents should definitely behave as change agents, but placed greater emphasis on diagnosis than on implementation and assumed that responsibilities in the latter area would be delegated to technical assistance teams from the State Department of Education.

The training session did little to clarify the issues involved in output interaction, as it focussed on the more immediate problems of gaining access to schools and negotiating requests. When the matter was discussed it was clear that the training team felt that the agent should be involved in follow-up activities in only a limited way, since they were not "experts" in substantive education fields and therefore could not provide the needed assistance in decision-making and implementation. They recommended strongly that the retrieval staff accumulate a file of consultants who would be willing to take charge of complicated implementation efforts.

In view of all these signals, it is not surprising that the field agents felt more uncertain about this facet of their role than any other. Given little guidance from the initial training, and conflicting or confusing directives from the project directors, each agent was obliged to develop his own style of output interaction. Since the problems associated with output interaction were even more complex than those involved in gaining access, the agents themselves became increasingly concerned about their performance in this area. This can be clearly seen in a checklist of training needs administered about a year after the beginning of the program (see Appendix H for training needs). Six items out of eighteen which were relevant to the field agent's role were marked as of "utmost concern" by at least five of the seven agents. Of these six items, five related to output interaction:

Helping clients to understand or interpret information.
Helping clients to translate research into action alternatives.
Helping clients to select appropriate solutions.
Motivating clients to utilize information or to try out new practices.
Helping clients to install innovations, helping in implementation

Given this distribution of responses, we may conclude that the agents felt that to some extent they had mastered the issues of input interaction, but were still very uncertain about output interaction.[1]

---

[1] As we shall see in Chapter 5, the clients in States A and B who received assistance with implementation tended to feel that the agents had done a good job. However, help with implementation was not as common as other field agent activities. In States A and B, only a half to two-thirds of the clients reported any assistance in implementation on the part of the agents. In State C, help with implementation was much more frequent, but also much less appreciated than in States A and B. Presumably in the latter State the agent's help was either more superficial or the clients were more impervious to change efforts.

This uncertainty was reflected in the behavior of the agents during the first months of the program. In some cases, there were even tendencies to reverse their assessment of the importance of follow-up involvement. A field agent with a strong background in educational administration (B-2) initially indicated that he hoped to become intensively involved with selected projects. He was interested in the problem of civil liberties in high schools, and actively encouraged several Superintendents to work with him on developing guidelines in this area. His personal knowledge of the issue led him to behave as a consultant vis-a-vis the Superintendents. In another instance, he picked up on a Superintendent's desire to improve the vocational program in the high schools and helped to make arrangements for the development of an inter-district, cooperative, work-study program. He was discouraged from these efforts by the comment of a training team member during a site visit to the effect that he was taking too much initiative on the work experience project, and also by his impression that the program would be evaluated largely by the numbers of requests generated.[1] Since that point, which was a few months after the beginning of the program, he was not much involved in decision-making or implementation activities of of clients. In contrast, another field agent, who initially felt that he did not possess the expertise to be involved in output activities, became highly involved as he gained confidence and acceptance in the target area.

---

[1] This impression was gained from a paper written by the team which raised the issue of quality versus quantity. While the evaluation team did not favor quantity over quality, it found that it was difficult to eradicate the impression that it had created by collecting information on the number of requests which had been generated in the first three months of the program. Since this particular field agent was originally behind the others in number of requests, his resentment over our revealing these comparative statistics may have caused him to emphasize quantity thereafter. Eventually he had a higher caseload than any other agent.

A major factor affecting field agent involvement was the difficulty of developing a systematic backup of readily available consultants. While the training team, and also the state project directors, emphasized the importance of turning clients over to state department consultants in the implementation and decision-making phases, it is clearly impossible to send out a consultant to work on every request. Furthermore, it took some time for the projects to develop adequate linkages with specialists in the SEAs so that technical assistance or consultant help could be proffered. Without this automatic backup, it was natural that some of the clients should turn toward the field agent, not necessarily as a substantive expert, but as someone who had the time to help them work through their problems and the alternatives offered by retrieved materials.

While the field agents continuously improved their ability to handle all aspects of their role, under-involvement in output interaction continued to be a problem for many of them during the first year and a half of the program. There are a number of apparent reasons for this.

Several of the field agents felt that the initiative for follow-up activity, other than merely delivering material to clients, should be left to the clients themselves. The reason for this seemed to be a fear of imposing themselves or of appearing to be directive and thereby producing antagonism.

> . . . you can become so directive people will get tired of seeing you. You lose your usefulness for a particular situation. So, you don't become a nuisance for something that's good. You provide a client with what he wants to satisfy his needs; you don't become a harassing figure to a person.

This uncertainty about how clients will perceive follow-up visits does not seem to stem from lack of expertise in the consulting role, since two of the agents who voiced this reluctance were previously consultants in their own specialties before assuming the field agent job. One of the agents in this situation seemed to have wanted to be more active in his constituent district, but felt that his role was still not well enough established to allow him to take a great deal of initiative.

Another factor was psychological insecurity owing to the marginality of the field agent role or the agent's doubts about his competence to engage in more intensive follow-up efforts, even when there was little evidence to suggest that his efforts in this direction would be rebuffed. One of our observers, for example, felt that an agent was extremely slow to develop past the point of merely generating requests and delivering information simply because of felt insecurity.

Leaving the initiative to the client may not be unwise in many circumstances, as mentioned earlier. However, clients may wish to receive more guidance but be reluctant to call on the field agent because they perceive him as being a very busy person. On one occasion a client who had received no follow-up after the initial visit felt that the field agent was sufficiently experienced to provide consultative help but could not possibly handle that type of interaction in addition to his other work.

Thus, the field agent must be careful to make clear that he is willing and available for future discussions. Several instances were reported wherein a client expected the field agent to make further call-backs, while the agent expected the client to call him. (See in particular the case studies of Field Agent B-2 in Volume II.) This type of misunderstanding clearly leads to an impasse.

Leaving the initiative to the client also eliminates the agent's role in stimulating a passive user (one who is not a self-starter or an innovator) to consider the possibilities for implementation inherent in the material. As was noted above, many of the clients felt that one of the best features of the agent role was that it "gets people turned on" and motivates them to move more quickly. While it is clear that the agent who pushes the client too fast will have little success, there do not appear to have been many instances wherein clients felt that the agent was pushing them harder than they wanted to go.[1] Thus, while there is some reason to be cautious, particularly where the field agent is relatively marginal or not yet accepted by school personnel, reliance on client initiative is not a uniformly suitable tactic.

Another reason for poor follow-up may result from general overload. In one case, a field agent anticipated that his job would be cyclical. He saw himself making a round of visits to administrators, getting requests, and then later making a second round of follow-up visits to all of them. The agent did not anticipate the rapid increase in the number of unsolicited requests, and subsequently found that he had little time for an intensive follow-up period. This agent lost track of some of his clients to the degree that he did not even know whether they had made any use of the material. At one point, he was very surprised to learn that a junior high school had implemented a learning resource center as a result of material that he had delivered six months earlier.

---

[1] For a discussion of one case in which there was some resentment, see the following section on over-involvement.

Other instances of poor follow-up occurred because of a lack of material directly relevant to the client's problem.[1] In one instance, for example, a field agent noted:

> I haven't heard anything [about the results] of that request either, and I haven't contacted him since it went out . . . I know what he wanted, and what he didn't want was what he got. What he wanted was a packaged plan of what to do . . . and there isn't one.

Another factor which helps to account for inadequate involvement in the follow-up phase is a lack of understanding of the overall goals of the program. Several of the agents initially felt that the main purpose of the program was to disseminate rather than implement information. The emphasis placed by one of the states on the importance of diagnosing "real" problems, while designed to guard against ad hoc changes or "change for the sake of change," also may have initially diverted the agents from thinking through their responsibilities in terms of output as well as input.

---

[1] It should be noted that one of the most important functions of the agent in some cases was to compensate for poor materials. See the case study of A-1 for an example of how one agent made use of other resources when the retrieval center was unable to provide the needed information.

While the above problems all play a part in the output phase, probably the most important factor is the sheer complexity of dealing with implementation in the schools. While a request may come from an individual, in most cases implementation within the organizational context of a school will require dealing with a group. The field agents, in order to provide significant input into the decision-making or implementation process, must have an intimate knowledge of the school, its personnel, possible negative reactions to the implementation, possible reactions to his own involvement in decision-making and implementation, feasibility, external support, etc. Since the agents have received only a little training in interpersonal process and organizational change, it is not surprising that they did not always feel that they could provide the resources needed to catalyze a situation where enthusiasm and commitment were not overtly present within the client group.

The opposite problem in defining the field agent role is over-involvement. While most of the agents tried to avoid devoting themselves to only a few clients or problems, the motivations for becoming over-involved in certain cases were very strong.

Several agents noted that there was a great deal of frustration connected with perceiving oneself as a change agent, on the one hand, and having to wait for a client's slow or overly cautious response to new data or ideas, on the other. One agent compared it to switching on a light, expecting it to come on, and being disappointed when it does not. Another agent complained that the necessity of disengaging himself before a project became fully operational violated his self-image:

> It's not a particularly rewarding job for me. . . . As far as innovation goes, I'd much rather be out in a school district . . . actually putting [innovations] into effect. . . . [This job] makes too low a demand on my expertise. . . .

A third agent indicated on several occasions that he had a deep personal need to feel that he was "leaving something" in his district.

A second motivation for selective over-involvement is the desire on the part of an agent to receive recognition of the service for having instituted important and successful projects. This motivation was particularly strong in the beginning of the program, when it was felt that having visible impact was necessary to help institutionalize the service. In addition to a desire to justify the service, some agents felt a personal need for recognition of their own contribution. One agent, for example, noted that he was very sorry that he had not maintained more intensive follow-up on a project which he had helped to design because "nobody remembers now that I started it."

Finally, it should be noted that a number of clients urged the agents to become more involved than they initially intended, either because they saw the agent as an extension of their own staff resources or because they were overextended time-wise on other projects. (These points are demonstrated in several of our case studies.)

Despite the strong motivations toward selective over-involvement, the agents continued to remain aware of the problem. An examination of several instances of over-involvement from the early stages of the program will indicate the kinds of problems that can arise from over-involvement, problems which motivated the agents to become more self-conscious about their degree of involvement.

In one case, a field agent entered the project with a specific area of interest which he hoped to explore with Superintendents in his target area. During initial discussions with the Superintendents, he introduced the possibility of working on this problem; but only one district was interested in pursuing the matter further, and even in this case the problem was apparently of relatively low priority. The agent, however, continued to be involved to the point where he began writing a policy for the district without strong collaboration from the administrator involved. When the observer asked him why he was writing the policy himself, he responded that it was because he wanted to. While there does not appear to have been any resentment on the part of the Superintendent at the agent's involvement (possibly because the two were good friends), it seems clear that if the agent really wished to gain some commitment to the effort from the district personnel, he should have arranged for more joint preparation of the policy under consideration.

As mentioned in Chapter 2, one agent was very active in initiating the idea of doing "needs assessments" in all of the districts in his target area. It was clear from the conversations of administrators in planning meetings for the needs assessment that a number of them were uncertain about conducting this type of evaluation in their district, and that they were a little fearful that too many negative comments would be generated by the procedure. Despite the fact that the agent was well aware of the anxiety of the administrators, he did little to involve them either in the construction of instruments or procedures to be used in the needs assessment, and he conducted the assessments himself with the aid of state department consultants. Because the administrators were not completely committed to the project, and also because they indicated that they felt that there had been too much influence from the agent, few of the districts really used the material which emerged from the assessment. A Superintendent commenting on the impact of the needs assessment stated:

> It has not made much change in [our] county. Some people feel that [the agent] influenced the answers on the needs assessment. The opinions were not high on the needs assessment, and didn't have too much meaning. We didn't even finish it out in [one town] because of negative feedback. It was too highly structured. People didn't get a chance to say what they really thought. The teachers thought it was routine.

This comment indicates the extent of resentment in at least one of the districts which had agreed to cooperate with the assessment. While it is possible that these educators would not have been enthusiastic no matter what the agent did, the above comment indicates that it would have been more successful if local personnel had been permitted to develop a less structured type of instrument.

In yet another case, the agent became very involved in the production of a televised in-service program on teaching techniques in elemtnary school which was to be shown to all of the teachers in his target area. His commitment was stimulated, in part, by the project director's commitment to experimental use of the internal educational television system present in the target area. The agent, however, became considerably more involved than the project director had anticipated, serving as the narrator of the television production and conducting a full-scale evaluation in conjunction with the media specialist in the intermediate organization. While the agent justified his nearly full-time involvement over a period of almost three weeks on the basis of the publicity which it gave to the pilot project, and also the fact that the media specialist needed him, the task occupied much of his time during a period when other field agents were busy making personal contacts with potential clients of the service.[1]

The above cases illustrate several important consequences of over-involvement. The first is monopolization of the agent's time over a relatively long period, ranging from several weeks to months. While in some cases this is probably justifiable, the benefits of intensive agent involvement must be constantly weighed against the fact that the agent is then prevented from spending time with other clients. This problem is particularly crucial when the agent does not withdraw even after the client has the resources and motivation to continue the implementation himself. As one Superintendent, who worked very closely with an agent, noted:

> Once [the agent] does her job of generating information on a problem, inspiring people, being creative and helpful, she must be pulled out of the project. Once it is set up, if she becomes too involved in its administration, she won't have the time to do her job anymore. . . . Once projects are set up, other people must be put in charge of them, no matter how enthusiastic she becomes. . . . I almost fell into this trap at the beginning, and I think she did too. . . .

The second problem which is illustrated by the first case is that over-involvement may undermine the initiative and commitment of the client. If too many decisions are made by the agent, and if the agent takes too much responsibility for implementation without engaging the client, the latter may come to feel that the project is being imposed upon him. Small group research on the process of implementing change indicates that individuals who are not involved in making a decision are much less likely to change their behavior,[1] and agents should take this into consideration even when they are placed in a consultative role vis-a-vis a client.

---

[1] It should be noted that our observer felt that in the long run the agent's involvement in this program did not detract from the development of the project within the target area.

A third problem which has emerged on several occasions during the program is the field agent's involvement with relatively low-impact programs. While it is not necessary to limit the agent's role to working on large-scale change efforts, it is reasonable to expect that the agent will choose to be involved in projects which seem to have either important educational merit or some reasonable potential for ultimate impact on the target educational system. This involvement problem seems to have arisen largely from the desire to produce visible results in the program.[2] Thus, one agent spent a great deal of time working on a project to determine whether inter-school wrestling should be part of the elementary P. E. curriculum.[1] Another became involved in the writing of nature walks for an elementary school teacher, and even volunteered to take one of her classes out on the walks. In yet another case an agent listed as one of her early achievements a request which resulted in placing radios on school buses to improve student discipline. While these activities are not educationally irrelevant (and judgements about the educational merit of a project are necessarily somewhat subjective), they do not seem to represent the best possible allocation of an agent's time, particularly given the normal constraints of overload.

---

[1] Lewin, Kurt, "Group Decisions and Social Change," in Swanson, G. E., et al., Readings in Social Psychology, New York: Henry Holt and Company, 1952.

[2] This procedure is especially unfortunate when such low-impact projects are used for publicity purposes for it might deflect the attention of potential clients from more important services which can be provided.

The problem cited above seems almost inevitable in view of the fact that the field agents were not furnished guidelines on how to develop priorities in the area of follow-up. In the absence of such guidelines, one of the most logical ways of judging where follow-up is important is by assessing client enthusiasm and desire for agent participation. Even this method is insufficient, however, in cases where the client urges the agent to become involved with projects which may divert attention from other, perhaps more important aspects of his role.

A fourth consequence of over-involvement is the development of a sense of identification with the clients, or what might be loosely called "territoriality." There was some indication during the early stages of the program that one of the field agents was developing a strong protective feeling about "his" clients and "his" area. This agent felt so strongly that all materials be delivered through him that he once objected to a suggestion that a retrieval staff member come out to deliver material. The retrieval specialist also noted that the agent was adamant about the fact that all specialists referred to his area work through him as well, rather than going directly to the client. In one case, he appeared anxious about the delegation of some responsibility for a project to a state department specialist, and directed several queries to the project director concerning his role in the project. While it should be stressed that this indentification has produced no problems to date, it is possible that there is some potential for "bottlenecking." So far, there has been relatively limited use of specialists; however, if the use of outside experts increased, and the agent still felt that it was essential that they always work through him, scheduling problems could occur. It is also possible that an agent with a more highly developed sense of "territoriality" than the one referred to above might become resentful or feel competitive with experts who participated in projects which he had initially considered his own.

---

[1] It has been pointed out to us that the agent became involved with the project during the summer months when business was slow. Thus, the agent was not required to make a choice between projects on which he wished to spend time. If this had occurred during the winter, however, he probably would have been required to do so. See Case Study for Agent B-1 for more information on implementation of the wrestling program.

It should be admitted, however, that when the field agent is just beginning to operate in an area, it is important to establish the significance of the role and of the project by creating an association in the minds of clients between the agent and their use of materials. A certain degree of "territorial" behavior may have the positive effect of increasing this association. In the case cited above, for example, the agent felt that his insistence on being involved in all transactions with clients was important in the early stages of the project when requesters were unsure of what to expect from the service. In the agent's own words, his major goals were "to offer the maximum necessary personal linkage, to assure high level communication, and minimize potential misunderstanding and bomb-outs." Also, it appears that collaboration between consultants, the agent and the client are quite desirable. The agent may assist the specialist by filling him in on the background of the problem and the client's general orientations. And by being aware of what the specialist has recommended, he will be in a position to provide continued support and follow-up.

Despite the attention given to over-involvement in the foregoing section, it should be emphasized that this problem has occurred in only a small minority of cases during the pilot period. The major problem was that of under-involvement.

Problems in Choosing Options and Strategies in Output Interaction --Quantity Vs. Quality

Ideally, the field agent provides individualized service to many clients. Unfortunately, these two goals are not compatible. While the agents did not begin to feel overloaded at the same point in the program, all of them have expressed a great deal of concern about their ability to handle the quality-quantity issue. One observer noted in the early months of the program that the agents were already finding it necessary to bring materials home with them at night and on the weekends. At this point the case load for the agents was only about 20 requests per month. Another field agent responded to an inquiry by an observer by saying:

> I get fifty requests a month, and as a result of last month's requests I have fifty return visits to make. Giving myself twenty workdays a month, I have to make five visits a day. Given this saturation of requests, I have no time for in-depth work.

In another case, the observer stated that the agent was having difficulty in developing sustained contacts with informal leaders who might help to alleviate his problems in handling many clients:

> He's still having problems in establishing priorities. He may develop some good contacts, but because of the need for increased coverage, he often has to drop these contacts [temporarily]. After all, it's such a big area. . . .

The optimal strategy under these circumstances would be to add another field agent and reduce the burden on the existing agent. In the context of the Pilot State program, however, this was financially unfeasible. The two options available to the agents were 1) to limit the number of requests that are handled every month in order to maintain individualization for every case; or 2) to routinize the handling of many of the requests, giving them less individual attention. Because of the pressures on the pilot project to justify the retrieval program, and to show the importance of the field agent concept, most of the agents have opted for the latter solution, at least in part. While they may work intensively with a few projects, most are treated with a certain degree of routineness--not by choice, but by necessity.

One way to measure the routinization of client interaction is simply to note the frequency with which certain field agent activities occurred under conditions of high and low case loads. If those activities which entail in-depth or individualized treatment are less often performed when case load is high, then we can assume with reasonable assurance that sheer quantity depresses the level of individualized treatment. Our data from the survey of clients in the three states permit just such a test.

In the questionnaire, we asked the clients to use a five-point scale for rating the agents on nine aspects of their role. In addition, we asked them to indicate whether they had in fact had any opportunity to observe each of these aspects. Here we use the percentage marking "can't judge because did not occur" as an indicator of routinization. Further, three of the activities listed in the questionnaire were selected as being especially indicative of in-depth or individualized treatment of a client's need. These items were: "further specification or diagnosis of my need or problem," "helpfulness in interpreting materials returned," and "helpfulness in implementing or installing a new practice."

Table 4.1 shows the mean proportion of each agent's clients who did not experience each of these three activities (i.e., degree of routinization) and also the case load of each agent during the five-month period of our survey. (In the final chapter of this Part of the report, we present the proportion of clients who experienced all nine aspects of the field agent's role which were listed in the questionnaire. There we also show the clients' ratings on each of these activities. At present, we are only concerned with the issue of routinization and case load.) Computing a rank order correlation, we find a correlation of .65 between non-occurrence of individualized attention and case load. Thus, we may conclude that agents who received requests from more clients were less able to give them individualized attention.

TABLE 4.1

MEAN PROPORTION OF CLIENTS WHO DID NOT EXPERIENCE THREE IN-DEPTH ACTIVITIES OF THE AGENTS, AND SIZE OF CLIENT CASE LOAD FOR FIVE-MONTH PERIOD

Field Agents	Non-occurrence of three activities ($\bar{X}$)	Five-month case load**
A-1	26% (28)*	72
A-2	23% (31)	84
B-1	18% (63)	92
B-2	44% (65)	97
C-1	10% (22)	44
C-2	14% (23)	38
C-3	22% (33)	43

*N's are approximate because of variation in number of clients responding to each of the three items.

**Represents individuals, not requests, and is based on retrieval records.

We also computed rank order correlations between case load and non-occurrence of each of the three activities in order to discern which activities were most likely to suffer from heavier case loads. Table 4.2 presents these correlations; and there it is quite obvious that the activities which were most affected were the two output interaction items, namely, helpfulness in interpreting materials and helpfulness in implementing or installing a new practice. The latter activity appears to have been especially sensitive to case load with a correlation of .88 between non-occurrence of implementation and relative number of clients. Apparently, it is follow-up activities which are considered most expendable when pressures mount.

TABLE 4.2

RANK ORDER CORRELATIONS BETWEEN NON-OCCURRENCE OF
THREE ACTIVITIES AND SIZE OF CLIENT CASE LOAD

Activity	Correlation
Specification or further diagnosis of my problem or need	.22
Helpfulness in interpreting materials returned	.57
Helpfulness in implementing or installing a new practice	.88

It should be noted, however, that size of case load did not negatively influence the clients' evaluation of the agents--at least among those clients who did experience the three activities mentioned above. For there is a strong rank order correlation between the mean proportion rating the agents as "excellent" on these activities and the relative size of case load (r = .82). What seems to have happened is that the agents with larger numbers of requests selected certain clients for more individualized treatment, which selectivity yielded high satisfaction on the part of those so selected.[1] Quite possibly, these were the more

---

[1] The rank order correlation between case load and client ratings of "excellent" on these three items is .93. The ratings, of course, were made only by those who had experienced the activity.

motivated clients, since it would have been natural for the field agents to have selected for special attention those individuals who showed some enthusiasm for the service. If this assumption is correct, then *higher case load has the consequence of reducing the field agent's attention to more hesitant or resistant clients*.

In sum, while routinization may be applied to *more* clients as case load increases, those who *do* receive attention are quite appreciative. The *higher the case load*, the *more selective* the agent becomes in dealing intensively with certain clients, and therefore the *more satisfied* the clients with whom he deals.

Overload appears to be a universal problem, but it is worse in more heavily *populated* districts where the number of potential requesters is higher and the number of relatively sophisticated educators who will make unsolicited requests is greater. Districts which are large in *area* pose special overload problems, too, since it is more difficult to make spontaneous unscheduled visits, or to respond rapidly to clients' needs for personal help when schools are up to 150 miles from the agent's home base.[1] Size of target area does not account entirely for the problem, however, since even the agents located in the two smallest areas (one small in size and population, the other relatively small in population but larger in size) indicated that there was more to do than they could adequately handle.

---

[1] Responses to our questionnaire administered to users indicated that the larger the area covered by the agent, the more likely users were to indicate lower satisfaction with the agent's *availability*.

The dimensions of the overload problem can be made quite clear by looking at the proportion of educators in the target districts who were reached by the program during the period covered by the BASR survey of users. In one of the smallest target areas (small both geographically and in the size of the target population), the agent received requests from 12 percent of the educators over a period of five months; while in a very large consolidated urban district within the same state, the proportion was less than 2 percent. Assuming that the agent can follow up intensively with only a small proportion of requests, this means that very few educators are receiving the detailed personal assistance which the program was designed to provide.

The above remarks should not be construed as a criticism of the field agent concept in dissemination and utilization strategies. On the contrary, the field agents have clearly been instrumental in stimulating educators in their area to use the service with greater frequency than areas which have been encouraged to do so *without* the interpersonal assistance of an agent. In the *non*-target area in the state referred to above, the proportion of educators using the service over the five-month period during which the questionnaire was distributed was only .004 percent. Table 4.3 shows the proportions of public school educators reached by the service in the target and non-target areas in all three states. Clearly, despite efforts by the Pilot State projects in States A and B to spread the retrieval service to non-target school personnel, and to encourage the appointment of information representatives to serve as clerical go-betweens for clients in these non-target districts, the field

TABLE 4.3

PROPORTION OF EDUCATORS WHO USED THE SERVICE IN FIVE-MONTH PERIOD, ACCORDING TO TARGET AND NON-TARGET AREAS

State A			State B			State C			
Target Area		Non-Target Area	Target Area		Non-Target Area	Target Area			Non-Target Area
1	2		1	2		1	2	3	
11.7%	1.6%	.004%	13.5%	3.2%	.009%	12.2%*	10.9%	7.2%	.006%
(551)	(2,500)	(26,564)	(651)	(2,860)	(22,000)	(580)	(350)	(600)	(9,600)**

*This field agent was helped considerably by a staff member of his intermediate organization. Hence, this figure represents the work of two field agents, in effect.

**The base numbers of percentages in State C are approximate due to the difficulty of determining professional personnel in the state directory.

agents were able to stimulate a considerably larger proportion of school personnel to make requests. Since these figures cover only a five-month period, projecting to the school year as a whole might yield percentages almost twice as high.

Given human limitations, it is unlikely that the present field agents could expand their meaningful coverage to a much greater degree than they did. If the original intent of the program is maintained, which was to give the field agent a catalytic role in encouraging educators to utilize research material, it will be necessary to develop strategies which will relieve the pressure of overload and give agents the time to work in-depth with more of their clients (Some possible solutions will be discussed later.)

The overload problem was exacerbated by several factors. Scheduling of return visits proved to be quite difficult, especially for those agents who covered very large areas and could not just "pop in" at everyone's convenience. In one area an agent had to make elaborate arrangements for visiting several schools or individuals since it was clearly an uneconomic use of time to drive 250 miles for a half-hour meeting. Two of the agents in the most rural of the seven areas noted that their scheduling problems were most critical with teachers. While it was possible to make appointments with administrators, teachers must be seen either during their free period or after school. But as one agent put it:

> In these rural schools the teachers are often very busy after school. They're in charge of after school programs, 4H, and so on. And if they're not busy, they want to go home. . . . I hate to pull the teachers out of their classrooms, because then

> they're nervous and can't really talk for a long time, but sometimes it's just impossible to get there for their free period, if they have one.

Even with administrators, follow-up may be complicated by the fact that they are not always in their offices; and even when available, often they are too busy to spend a great deal of time with the agent at the moment when he arrives. And yet, several agents reported that they were compelled to spend more time with them because administrators were less likely to take the time to order and read fiche. One field agent said,

> Teachers will use microfiche readily. Principals, Superintendents and high level personnel don't have time for fiche and readers. . . .

Two other field agents indicated that their administrative clients rarely read even the profiles as carefully as did the teachers.

Technical problems with the data base or the format of the material also interfered with effective output interaction, especially during the early phase of the program. While initially some of these problems were caused by the relatively high proportion of low-relevancy retrieval during the first few months, client problems with ERIC abstracts remained. Requesters who were not familiar with using abstracted material often found it difficult to deal with the computer output. Since many of the agents were equally unsophisticated, in the beginning they too had trouble.[1] One agent felt that this was sometimes a serious drawback in the follow-up phase:

---

[1] This problem is exacerbated by the lack of consistency in abstracting procedures within the ERIC system. Some of the abstracts are analytical, some merely outlines of topics, etc. This variety of format makes it even more difficult to determine which articles might be most pertinent to the client's problem.

> Frankly, we lost some customers [because we had nothing but abstracts for the first nine months]. . . . Teachers, at least many of them, just can't read those abstracts, they get turned off. Even I can't get everything out of them that's there sometimes. I'd go in, and they'd say, 'I got this and this and this out of these three abstracts, but I'm not sure that I understand what's in this one,' and I'd have to say that I couldn't get anything more out of it than they did.

While less sophisticated clients were probably overwhelmed by the abstracts, more sophisticated clients were also somewhat critical. The research director for an urban district stated that he had not found ERIC abstracts very useful since they were not well screened at the ERIC Clearinghouse, and were therefore difficult to digest and often full of dross. He looked forward to the time when there would be a larger number of technical packages for use in the schools. A principal in the same state commented that he had had some contact with ERIC when he was in graduate school, and that he was somewhat skeptical of its usefulness for the same reasons.

The problem of getting people accustomed to using research materials was compounded by the general lack of hard-copy in two of tne states. If the agents found the clients somewhat resistant to abstracts, microfiche produced even greater problems. Not only were many educators initially unenthusiastic about fiche, but there were too few fiche readers to serve certain target areas adequately, which meant that there was often a considerable delay between the time the fiche was received and when it was read. As one agent pointed out:

> Say I have taken the fiche reader for a two week loan to someone in X County. And the next week I get a bunch of fiche for someone in Y County. Well, those two are over 250 miles apart, and I might not be able to get a fiche reader to that second guy for three weeks.

Furthermore, the portable readers used by the field agents produced some problems in themselves, since they tended to be less adequate in their reproduction and ease of reading than larger readers. One agent, in final exasperation, began de-emphasizing the availability of fiche, and instead located money to pay for the reproduction of hard-copy material.[1] While we cannot assess the full impact of such technical difficulties on output interaction, it is clear that in a number of cases it interfered.

Even when technical and scheduling difficulties such as these were minimal, and when a field agent managed to enter into more detailed follow-up action on a request, the problem of choosing the appropriate style of involvement remained. The main issue here seems to be the extent to which an agent should help to direct the course of action or deliberations of the requester. As noted previously, several of the agents were reluctant to play a large role in decision-making and implementation processes for fear of antagonizing or pushing clients too hard. Other agents, however, were highly directive, to the point where they picked up an idea and tried to "sell" it to potential users. Still others followed a middle ground inasmuch as they attended meetings and discussions on the material and made themselves easily available for further help, but limited their role to tacit support and facilitation of the implementation process. The following episodes will serve as examples of the three different styles.

---

[1] Despite these problems, it should be noted that negative response to microfiche was apparently less than anticipated by several of the agents. While several agents originally felt that most of their clients would reject the use of fiche readers, they were surprised at the number who are willing to use the machines without complaint.

> Little initiative. A Superintendent made a request for information on Individual Programmed Instruction systems. He was extremely interested in the material returned by the field agent, but indicated that the IPI program was probably unfeasible for his district because of its expense. The agent indicated to him that he might like to visit a school that had the IPI program installed, but stated later that he would not make a deal of effort in this district because the poverty of the schools mitigated against innovation in this direction.
>
> Moderate initiative. A principal made a request concerning teacher evaluation instruments. The agent returned the material, discussed it with him, and made a later follow-up visit to review the form that the principal himself had designed. The agent felt that the principal's form did not adequately reflect the recommendations made in the retrieved material to distinguish between constructive evaluation (information to be fed back to the teacher) and punitive evaluation (to be used for hiring-firing decisions). He pointed this out to the principal, told him that he would meet considerable teacher hostility and anxiety with the form that he had designed and made suggestions for changing it.
>
> An agent received a request from a principal who wanted to do a comparative test of two new reading programs in his schools. The agent retrieved materials which helped the principal to set up the two programs, volunteered to get consultant help in designing an evaluation of the test and worked with the principal in designing the evaluation form. The agent played no part in actually implementing the program, but dropped in occasionally to "see how things are going" and to discuss program development.
>
> High initiative. An agent talked to a state department consultant as a result of a request for social studies material. During the discussion the agent became interested in the idea of creating a social studies council composed of all interested social studies teachers from all of the schools in his target area. He felt that such a council would help to coordinate and make self-renewing the social studies curriculum in the high schools. The agent arranged for a meeting to develop such a council, which was greeted with enthusiasm by social studies staff members.

Which approach is the "right" one? To what degree should the field agent intervene and help to direct the course of innovation in a district, school or classroom? This issue seems to have caused some anxiety among the agents during the initial phases of follow-up involvement. In fact, no clear-cut answer to questions such as these emerged during the course of the pilot project. While it seems apparent that total lack of directiveness may have some of the same negative consequences as lack of involvement, and a consistent pattern of highly directive activity may produce resentment or over-dependence on the part of the client, any behavior between these extremes may be acceptable depending on the situation, the characteristics of the client and the problem, and the relationship between the field agent and the client. For example, in the case where the field agent pointed out the poor utilization of the materials in the construction of the teacher evaluation instruments, the principal was extremely appreciative:

> [He] was out here one day and he told me, 'If you were a teacher and I were the principal how would you like me to use this form on you?' and in doing so made me see that I don't like things to be black or white.

Clearly, the relationship between the agent and the client in this case was such that the agent could make constructive suggestions without being threatening or appearing critical. Since the suggestions made by the agent did not require any special expertise beyond a knowledge of the retrieved material and an insight into interpersonal relations, there was little danger that the agent would be imposing invalid ideas on another person.

In the case where the agent helped a principal set up a test of two reading programs, there would have been little point in field agent intervention. The principal had a very clear-cut idea of what he wanted to do. The project seemed to be a sound one, and the only need was for facilitating technical and research assistance. Perhaps the most important function of the interpersonal relations provided by the agent in such situations is the provision of support and approval from outside the system.

In another case where the field agent was instrumental in helping the school install a learning resource center, the principal reported that he really appreciated being "sold":

> Somewhere along the way [she] sold me on the thing. This is an important part of the role of the [field agent]. . . . We're conservative and cautious. . . . She's not going to push anything on me . . . [but] I'm convinced that I wouldn't have tried the LRC if it hadn't been for [her] starting the ball rolling.

The agents who attempted to "plant" ideas for new developments in clients' minds met with varying success in actual implementation, and there were few instances where the clients felt they were being railroaded or unduly influenced by the agent. The needs assessment program mentioned earlier is one example where field agent initiative seemed to be too great for the clients' needs. The social studies council, however, appears to have been quite successful, and later the agent was able to withdraw from the situation after having set it up. Given the varying results of high initiative and directiveness on the part of the agent, the best general advice is that caution should be used when initiating ideas among potential client groups.

In summary, the field agents who discussed this problem agreed that there were no hard-and-fast rules, and that determining the degree of directiveness was part of the sixth sense which the field agent must develop over a period of time. Here are the comments of three of the seven agents:

> Normally I like to be non-directive. . . . However, if I come across something that I know is really what the client needs, I will bring the hard-copy to him without a request.
>
> With me, I really let the client determine the degree of directiveness of the field agent.
>
> We would not make decisions for these people. We did not push a certain program on them. If we were asked our opinion sometimes we would give it, sometimes we would not, sometimes we'd get more information for them.

The Impact of Client Expectations on Field Agent Follow-Up

Given the general ambiguity surrounding the agent's role in follow-up, it would not be surprising if many clients were also unclear initially about what the field agent was supposed to do in this area. Since effective output interaction requires consensus between the client and the agent on the agent's role, this type of ambiguity is potentially dangerous. (We have noted, for example, that one of the agents who felt that it was better to leave up to the client the initiative for output interaction was thwarted by the fact that a number of his clients were under the impression that it was *his* job to call them first.) Another problem arising from a poor definition of the field agent role in output is that occasionally clients came up with very peculiar notions of what the agent was supposed to do. We have already noted (in Chapter 2) that one agent who invited administrators to *help* him define what functions they wanted him to perform in the district ran across a number of suggestions which were unrelated to the goals of the program, such as acting as an ombudsman for the district or helping to improve communication between Superintendents from different schools. In another case, a consultant in a large school district saw the field agent's role as conducting in-service training seminars for administrators so that they could use the dissemination service without having to go through the agent at all. In a more rural area, an assistant Superintendent felt that one of the main services of the agent should be to help districts obtain more federal money.

Most of the misunderstandings, however, may be grouped according to those clients who expected too little activity in the output phase and those who expected too much.

> Expected too little. In February, 1971, both of the field agents in one state indicated that they were having difficulty in relating to teachers. Most of the teachers tended to see them as suppliers of materials rather than as sources of information and possible help in innovation. In one case, the agent also complained that many teachers felt that one of his primary functions should be to help them cut through the red tape in obtaining services from the county staff specialists, rather than providing any unique services of his own.
>
> In another state, a field agent reported that an influential Superintendent initially saw his role only as an information getter, and not as a person who could be helpful in working through problems and implementations.
>
> A specialist in a small metropolitan district reported that he saw the field agent as "the index to a book," and a timesaving device for seeking information. He did not see any role for the agent in his own use of information.
>
> An observer reported that a frequent user of the service saw the role of the agent as an "errand boy" even though he admitted that the agent had enough expertise in several fields to confer with him on his requests. The client remarked that he was surprised that an individual with so much experience would take a job of this type.
>
> Expected too much. An agent reported that she had some difficulty in defining her role vis-a-vis a Superintendent with whom she was working very closely. She said that the Superintendent had originally expected her to supervise all new projects in the district, while she believed that she should only involve herself

> to the point of helping set up programs.
>
> An agent reported that he was having difficulty in getting time commitments from a school with which he was working, noting that they expected him to do all of the work in helping to plan for a new program.
>
> Voicing a similar complaint, an agent felt quite strongly that much of her overload problem stemmed from the expectations of clients and others that she would take complete charge once they had made a request. She gave an example of a Superintendent who wanted to do a needs assessment and asked her to develop all of the procedures for carrying it out. In another case, she noted that she had been given the responsibility for demonstrating an innovation which she knew very little about to all of the districts in her target area. Furthermore, there was an expectation that she work on the development of the media center within her intermediate agency in addition to her work as a field agent. This agent was clearly suffering from the expectation of others that she would be "all things to all people."

System Constraints and Contextual Influences

While many of the agents were extremely successful in "using the system" to aid their output interaction,[1] some problems inevitably arose in this area. A number of the constraints on implementation were completely beyond the control of both the field agent and the client system. The agent who was very involved in helping a Superintendent write guidelines for student rights discovered that there were bills in the state legislature which would substantially affect the direction that such work should take, so the project had to be temporarily dropped. In another case, an agent was working with a Superintendent on the development of an educational park plan for the district, but the community refused to accept the necessary step of closing one of the smaller elementary schools.

---

[1] This point will be discussed in more detail later.

In another instance, a Superintendent was reluctant to work on a problem identified jointly with the agent because of the high level of tension in the community during a school board election period. Since two of the candidates were running on a platform which was critical of the Superintendent, he preferred to "lie low" for a while and not excerbate the community conflict.

Similar impediments may arise within the system itself and present obstacles which the agent and the client cannot easily overcome. A principal expressed a desire to try team teaching in his high school, but felt that two of the teachers who would have to be involved were so traditional that it would be hopeless. Rather than make a strong effort to convert them, he preferred to wait a few years until they retired. In another case, an agent worked through some ideas for a new auto mechanics course with a principal, only to have the Superintendent state that this type of program was low priority and was not to be considered at that point. Other agents found that even where clients were very committed to a new idea, often there was not enough money or necessary resources to carry the project through. In such situations, there is little that an agent can do in the short run to alter the behavior of school personnel, although in the long run he may be able to interject information which will motivate recalcitrant individuals to be more interested in the desired change. These types of difficulties, while frustrating for all of the participants, are inevitable in any school system.

Another problem encountered by most of the agents was becoming involved in a request which was (or had the potential of becoming) politically sensitive. At the beginning of the project, the agents agreed that such situations were to be avoided at all costs because of the possibility of damaging the image of the program. Nevertheless, because of an agent's commitment to work through problems with a client once a request had been made, it was sometimes difficult to drop projects of this nature. Furthermore, until an agent becomes extremely familiar with the systems in which he is working, he simply may not be aware of situations which have the potential for conflict.

Most of the instances which occurred during the early phase of the pilot program were not serious in the sense that they permanently affected an agent's relationship with a district or school. The problems which occurred most frequently seemed to involve some friction between individuals or factions within a system with respect to authority or the direction which new programs should take. Here are some examples:

> An agent had received a request from a high school principal to arrange for a workshop on vocational education. The agent was not satisfied with the results of the workshop but sensed that there was an interest within the school in continuing to work on this issue. Nevertheless, he felt that it would be unwise for him to initiate further action, because of the conflict in the district between the Superintendent and the high school principal.
>
> An agent was asked by a Superintendent to retrieve material on special classrooms to which disruptive pupils would be temporarily assigned. The Superintendent's position was that such classes were a better way of dealing with difficult students than was expulsion, which merely allowed the students to hang around town with little or no supervision during school hours. His view was that the primary function of such classes should be remedial in nature and not merely a substitute for expulsion. The agent mediated between these two viewpoints by attending meetings and communicating the feelings of the principals and teachers to the Superintendent.

> In two instances, an agent felt that he had been caught in a "middle management" problem. In both cases, a request was initiated by a teacher or group of teachers. The agent had discussed the problem under consideration with the administrators in the district, but the Superintendents had become more involved than the principals, who did not evince much interest in the projects until they were well underway. At this point, they began to feel that they had been excluded and that outsiders were meddling in their schools behind their backs. While neither of the projects was damaged by strained relations, the agent concluded that he would try in the future to minimize his "visible role" in such projects, and merely facilitate communication between all interested parties.
>
> In the needs assessment situation the agent discovered that although the principals had agreed to the Superintendent's suggestion to his face, there was a considerable degree of resentment which had not been voiced earlier concerning what they regarded as high-handed intrusion into their schools. This annoyance at lack of real consultation made their reaction to the needs assessment procedures more negative than it might otherwise have been. The agent stated that, "We had principals who literally paced their offices when we were in the building . . . it was such a threat. It really shook them. They interpreted it as a threat to them."

A number of conclusions may be drawn from the experience of the agents in dealing with troublesome or competitive situations like these.

1) An agent should not avoid all situations where there is disagreement or mild conflict between various individuals in a system because, owing to his outsider status and his access to presumably neutral research information, he may help the parties to avoid or alleviate conflict. For example, one Superintendent indicated that the agent's presence allowed him to avoid "pushing" a conservative principal to reconsider his position on student tracking:

> The principal had been resistant to change, and also he would have felt threatened [had I suggested it]. We used the agent to sugarcoat the pill.

The agent may also facilitate communication between various hierarchies, as in the use of the special class above and in the case described earlier where the teachers were unhappy about the evaluation procedures being designed by the principal. Because an agent may occasionally have better access to the thoughts, needs and concerns of individuals who are in the lower levels of a system than do higher administrators, he may sometimes function to bring these problems to the attention of higher levels. In this limited sense, then, the agent might perform as an ombudsman.

2) The agent should take great care not to bypass or exclude from discussion of a problem or planned solution those parties who might be affected by any decision. School systems are not fully traditional bureaucracies with concentrated power and administration by rules. Rather, schools are most effectively run as professional organizations with some collegial cooperation between the various hierarchical levels and delegation of authority to lower level administrators and teachers. Effective functioning in such a context requires at least some legitimation of a decision at several levels, and individuals who have been excluded from the decision-making process may feel some resentment which is likely to be translated into resistance to new policies or ideas. Again, agent sensitivity to this problem may help an administrator or a group of teachers avoid conflict while getting the changes that they desire.

3) Another type of systemic problem which the agents encountered was in trying to use the system to relieve their overload in output interaction. A number of agents attempted on several occasions to

involve administrators in problems by delivering material to them, requesting that they look at it and then give it to the appropriate teachers. While this worked in some instances, it often proved to be a bottleneck. In a number of cases, the material sat on the administrator's desk until the agent returned to the building. In others, the material simply disappeared, or at least no individuals had any recollection of having received it. Thus, while this procedure is a potentially attractive way of dealing with the overload problem while maintaining administrator contact, it seems to be generally ineffective.

Field Agent Solutions to Problems in the Output Phase

Using the System

The issue of whether the agent should stress a systems approach to problem solving or deal primarily with individual problems has implications for output interaction as well as for input. Assuming that the agent is suffering from overload, and that he cannot possibly follow up intensively on all of his requests, one of the ways in which the agent can increase his visibility and impact is to use the system even when he may consciously try to avoid selecting only administrative or system level requests and clients.

Taking advantage of opinion leaders and self-starters is one method of ensuring that the time spent in output interaction will be effective and will eventuate in reaching a larger number of people. In many instances an agent noted that a teacher will discuss the material with others who have similar problems, and that the material will then be passed around within a school.[1] In the case of self-starters (who are not necessarily synonymous with opinion leaders), the need for extensive interaction with the agent is probably less, since they are highly motivated to use the material and would very likely have done their own research even if the project were not available to them.

If there is an overload problem, however, spending time with opinion leaders may result in spending less time with timid or less well-integrated individuals. The danger in following such a tactic is that potentially good projects may be overlooked, and those individuals who might benefit most from an injection of the agent's enthusiasm might be the least likely to receive it. (This point was discussed above with reference to selectivity of clients under conditions of high case loads.)

Selectivity of this type also requires that the agent be very familiar with client and school characteristics. It therefore seems advisable that new agents be very careful in using such a tactic. Even the opinions of others in the district may be misleading: one agent, who spent little time with a principal because he was known to be conservative, found that when the individual finally made a request, he was much more interested and motivated than had been anticipated. The agent should also guard against spending all of his time with a few individuals or schools, since over-selectivity may jeopardize his position in the district. Nevertheless, where pursued in moderation, such a tactic seems a reasonable way of ensuring that some utilization will be made of materials, and especially that materials will reach a wider audience.

---

[1] Overall, 40 percent of the requesters loaned or gave the material to a colleague, according to our survey of users.

Another tactic which was very effective in ensuring that action or planning emerged from an individual request was encouraging others to participate in discussions and planning sessions between the agent and the original client. This helps to legitimize requests from the teacher level, and to avoid the potential conflicts of authority between school personnel. Several agents developed a typical pattern in which they discussed a teacher's request with the principal and asked that he make himself available for a meeting with the teacher and agent when the material was delivered.

> We were always careful about channels of communication, making sure that a principal knew that we were in his school. We wanted him to be aware of what his teachers were asking for in a fifteen minute summary meeting with him after our discussion with teachers. Then, when we'd return with requested information, we'd ask the principal to sit in on our discussion with the teachers so that we could sell them both on the idea of research information.

Other agents facilitated such meetings in cases where the teacher was reluctant to use material without positive responses from administrators, or where the ideas under discussion had a potential for wider use in the school or district.

Working with school or district committees was another method used by the agents to increase their coverage. Since committees have usually been created to perform a specific task, the chances that materials will be utilized in such groups are usually higher than for individual requests. Working with committees also helped to alleviate some of the overload problems of the agents inasmuch as meetings could be scheduled in advance, and the agent could deal with several clients at a time. This was of particular advantage in the case of teachers who were more difficult to contact individually for follow-up work.

> I don't think that I'm cutting individuals out by working on committees, it's just that committees have clear-cut times for weekly meetings, whereas with individuals scheduling is harder. You play it more by ear and, since there are so many, the contacts are more complex.

The agents in this project did not limit themselves to dealing with existing structures in their districts, however. Several made active efforts to create new structures to facilitate the implementation of projects. Many of these efforts involved the expansion of an individual request to a project involving more people or even several schools. Here are some illustrative cases.

> A principal and the agent decided to have a science specialist visit the school to evaluate the science program. The agent requested and had a meeting with the Superintendent, the principal and the curriculum specialist . . . at this meeting it was also decided that the project should be expanded to the whole district.
>
> A teacher made a request for information about teacher-community public relations. When she received the material, she remarked that she probably wouldn't be using it that year, since their contract had already been negotiated. The agent suggested, however, that it would be a good idea to create a committee composed of teachers, the Superintendent and a school board member to work on this problem in advance.
>
> A curriculum consultant made a request for materials on how to include ecology in science courses. The agent, with the help of a local university professor, was able to set up a graduate workshop for teachers in the area, which was well attended and stimulated much interest among the teachers: "The activity that this has stirred in science around that school . . . well, all of a sudden you got some people who felt like they were dead, alive again."
>
> An agent received a request from one school for help on math. When they agreed that it would be useful to have a specialist from the state department come to the school, the agent, on her own initiative, asked whether the other schools in the district would also like to have some time with the specialist. Several coordinated meetings were arranged.

> An agent received a number of requests from different districts on teacher evaluation. Sensing that this was an issue of concern to all of his clients, he arranged to hold a workshop on teacher evaluation for the entire area. The workshop was held in one district which had already begun to work on this issue.

Another means of creating new channels of communication to stimulate larger numbers of individuals to work on their problems is inter-district visitations to exemplary programs. One of the agents used this technique extensively, and felt that it was an important means of alerting teachers to what could be done in their own schools. He also felt that such visits helped to breathe a sense of reality into some of the written materials. Again, the advantage of such a tactic is that it allows an agent to reach a number of individuals at the same time.

There was some variation among the target districts in the freedom allowed the agents to create new structures at lower levels within the system. While some agents had complete freedom to initiate committees and workshops, because of relatively decentralized district structures, others were limited almost exclusively to working with already existing committees which had received administrative approval. An observer noted that one agent "attempted to set up committees [at the building level]. However, because very little support is given to activities not under direct line supervision, most of his efforts have fallen by the wayside. . . ." In another instance, it was noted that "committees at intermediate levels are [not] given substantial authority for engineering educational changes. Therefore, an analysis of the definitions of the role of [field agent] is integrally tied to definitions handed down [or not handed down] from the Superintendent or his representative."

In cases such as these, the field agent may be most effective by behaving, at least part of the time, as a representative of the Superintendent. If the Superintendent can be won over, or convinced of the worthwhileness of an idea, it may be quite easy to move toward implementation. One Superintendent who wished to keep firm control over what was going on in his district indicated that he was very open to suggestions and initiative on the part of the agent as long as he had control over the steps that were taken.

> I don't mind change agents as long as somebody has control of the change . . . if you are in a system where decisions are made by authorities, change agents are all right. They can open your eyes, but they must not have the authority to accept or reject their own suggestions.

In such a case, for example, it would probably be dangerous to help implement a scheme for individualizing instruction with an individual teacher, or even with a principal, unless the Superintendent had given a mandate to the field agent.

While a tightly-knit authority structure may help to facilitate implementation, it may also hinder it if the Superintendent is not oriented toward change. One agent had the experience of trying to work with a district where the Superintendent was openly hostile toward the program. While he did attempt to reach some individuals in the district, he was unable to stimulate any real innovation because of the Superintendent's rejection of new ideas. While the agent has not totally avoided the district, quite sensibly he decided that his time would be put to better use in other systems.

Thus, each agent has come to know his target area's structure: its leverages for change, the level most fruitful for action, and the individuals who could help him with his tasks. While these characteristics alone did not entirely determine the pattern of time allocation, it is quite clear that they were taken into consideration in helping to increase the impact of the program.

Delegation of Responsibilities

While the agents developed many unique ways of handling their role, every agent except the one in the smallest district independently came up with the same idea and means of handling the overload problem. This solution (which has not really been systematically tried out as yet) was to delegate some responsibility for the collection of requests and delivery of material to personnel at the building level. One agent, for example, developed quite an elaborate plan to create interdisciplinary research committees in each school. These committees were to be responsible for determining the research needs within their school and for working with the retrieved materials to help develop solutions. Since this agent worked in a very large urban district, he felt that this was the only way in which he could effectively cover his territory. At this writing, he is unable to implement the interdisciplinary concept as fully envisioned, but several principals have agreed to set up specialty area committees.

The three agents in the most rural and physically dispersed areas felt a strong need for an individual to coordinate requests in each school, partly because they felt that they were incapable of handling the number of requests which they received, and partly because it was so difficult for them to travel the vast distances involved for each individual request. While they apparently anticipated that the contact person would be most useful in the input phase--wherein he would simply gather together a week's requests and mail them to the agent--it was thought he could also be used for simple delivery of materials while follow-up visits could be coordinated for each school at a later date. At this point, one of the agents has already set up contact individuals in some of his schools. He was motivated in this direction when he discovered that a librarian at one school was already serving in this capacity. The agent feared, however, that he would not receive official administrative support for moving in this direction, since educators were "being coordinated to death." The final agent has operated in this fashion since the beginning of the program. Generally, he has tried to reach teachers by working through the principal, rather than contacting them directly.

The implications of these steps for the structure and functioning of the program are great. If delegation is effected, it will result in a far greater routinization of the request-handling process than has hitherto existed. Most of the agents still had their finger on the status of each request, background information on the motivation behind the request, particular school characteristics which should be considered in the implementation process, and so forth. If the majority of requests are transmitted by forms, the agent will inevitably lose touch with many of the problems within the target district. The advantage of this greater routinization will be a saving in time, of course, which will allow the agent to focus more clearly on projects or problems which are really in need of personal attention. The agent will need to develop some new means for choosing the requests to work on, however, since he will have less information about the needs and motivations of requesters.

Clearly, if delegation is widely used, the role of the agent will change radically. No longer will he need to function in a messenger capacity since pick-up, delivery, and many of the clerical aspects will be handled by someone else. But the agent's role in diagnosis and specification (probing) will also be reduced, since he will probably contact a client for clarification of a request only when it is completely unclear what is needed. Presumably, the contact person within the school will take over most of the responsibility for making sure that the client understands more or less what he wants from the request.

With these aspects of his role diminished, the agent will have to justify his presence in a target area to a much greater extent on the basis of his ability to handle and interpret research results, and to facilitate implementation. In a sense, he will be required to move more in the direction of a change-agent role if his position is to have any continuing validity or usefulness. On the other hand, he may be hampered in effecting real change since he will be somewhat removed from the client and his day-to-day context. Further, to the extent that his former messenger role served to legitimate later change efforts, he may lose legitimacy in the eyes of his clients to accomplish precisely what he intends to devote more time to. In sum, this particular solution to the problem of overload is much more radical than other possible solutions, such as working with committees or selecting only certain clients with whom to work in depth.

It should be noted that all three of the states involved in the program are planning to move in the direction of establishing regular contact persons in each school or district in the near future. In two of the states, the agents are envisioned as moving into a coordinating and training role for contact individuals rather than as focusing more intensively on utilization or output activities. While this move may be justified in terms of economy and efficiency (most districts are not willing to add an agent line to their already tight budgets, and the federal government may not wish to support a denser network of district level agents), contact individuals in the schools will not be able to perform many of the important functions which had been handled by the agents during the pilot period, since they will have neither the training nor the time to work with clients in depth. Such a move, we feel, will weaken the interpersonal aspect which characterized the first year and a half of the pilot project.

Record Keeping

Another, less radical means of coping with some of the problems of overload (and possibly also the problems of over- and under-involvement) is to move toward a much more systematic record-keeping system. Most of the agents found that it was unnecessary to keep detailed records of contacts with clients in the very beginning of the program because they were able to retain most of the information in their heads. As the number of persons contacted and the amount of materials flowing out increased, however, most found it necessary to establish more elaborarate ways of keeping track of their clients. In one state, a form was established on which the agents noted both their "input" and "output" visits for each week. This form served the double purpose of allowing the agent to check back on his work, and of informing the central project staff of his current work pattern. In other cases, agents kept such records for their own benefit. At this point, none of the agents used these records systematically for the purposes of scheduling follow-up visits, but one retrieval staff member suggested that it might be very useful to keep a card file with the date of the last visit for automatic scheduling of a return visit when a set time period had elapsed. While such a format might be a bit too rigid for the purposes of treating each case in an *individualized* manner, some variation on this idea could be useful for reminding the agent of needed, first follow-up visits and of clients who might require extra attention.

Timing According to the School Year

A final technique for helping the agent to relieve some of the problems associated with output interaction was instigated by two agents in two different states. These agents attempted to develop a case load of important requests with clients *before* the school year was well underway. They anticipated that *during* the school year less time would be spent in soliciting requests and more time would be spent working with problems already identified, several of which might require the entire school year for working them through. In other words, the agents were attempting to take advantage of the cyclical nature of the school year under the assumption that school personnel are more inclined to think about their needs early in the year and have little motivation to work on many types of problems as the year draws to a close in the spring. In one of these cases, the agent spent most of the summer visiting potential client schools and discussing their needs for the fall. Instead of focusing on short range problems, he attempted to get clients to initiate requests which were relatively long-range. In the second case, the agent held a fall meeting of all of the Superintendents in his target area and also of SEA personnel. The topics of discussion were programs which were already working within the districts, and areas which the Superintendents felt deserved special attention during the coming year.

For a number of reasons, neither of these approaches seemed to have fully solved the problem of limiting follow-up work to manageable proportions. The agents, because of the broad scope of their role-definition, did not feel able to ignore new requests or to automatically give them lower priority. Furthermore, there was some organizational pressure on the agents to keep generating new requests over the school year; for although it might have been advantageous for the agent to operate on a cyclical basis, the retrieval staff was geared to a continuous flow of work.

Setting Up a Team of Agents

Thus far we have discussed solutions which were tried out by several of the field agents. There is an additional solution, however, which was not feasible for the most part because of its added cost, namely, the hiring of field agent teams. In only one area was this solution developed by acquiring the services of another staff member of the intermediate service agency. The field agent himself was the director of this agency and could therefore assign one of his staff to help him. Consequently, a division of labor was worked out whereby the original agent, who had an administrative background, devoted more attention to district level personnel, while his assistant devoted more attention to elementary teachers. According to our five month survey of requesters, 30 percent of the original field agent's clients were located at the district level, compared with only 13 percent of the clients served by his assistant. At the lower end of the educational hierarchy, only 11 percent of the original field agent's clients were elementary teachers, compared with 31 percent of his assistant's clients.

We noted in Chapter 2 that the agents tended to gravitate to personnel in positions similar to their own backgrounds. One virtue of a team, therefore, is that it permits a combination of agents with different backgrounds so that particular types of clients are not overlooked. And quite obviously, more requests can be handled in a particular area, thereby easing the overload problem as well. There probably should be some overlap in the nature of case loads, however, so that different agents are in touch with all levels of the educational system. This would be especially important for the agent concentrating on teachers who might need to work with district administrators in order to implement change in the system. But some degree of specialization by system level is probably desirable, and only a team approach makes this possible.

CHAPTER 5

A STATISTICAL PROFILE OF FIELD AGENTS' ACTIVITIES AND CLIENTS' EVALUATIONS

The foregoing chapters have richly documented the everyday activities of field agents in the Pilot State Program. These observations were derived for the most part from qualitative data gathered in the field by observers. The purpose of the present chapter is to present a *statistical summary* of the agents' activities based on the survey responses of clients in the three states. (The survey, it will be recalled, covered about a five-month period with questionnaires being mailed to clients approximately three weeks after the receipt of information. At the time when the survey was begun, the Pilot State program had been in operation for about a year.)[1] Also, for the first time in our report we compare target and non-target clients in an effort to delineate the special contributions of field agents to a statewide dissemination system in education.

First, we compare the *positions* of clients who were served by the program in target and non-target areas over the period of the survey. Second, we examine the frequency with which any *assistance* was rendered by field agents and by other specialists in target and non-target areas; the amount of *time* spent by the agents in assisting their clients; and the clients' *evaluations of assistance* from different sources. Third, we examine the frequency with which the agents engaged in *specific activities* during their meetings with clients. And fourth, we present the clients' evaluations of these specific activities. In a final section, we classify the activities of the agents according to the extent of their occurrence and, simultaneously, the clients' evaluations of their performance in an effort to identify functions which should be increased in either "quality" or "occurrence," or both.

---

[1] See Introduction and Chapter 12 for further details about the survey.

The Positions of Clients in Target and Non-Target Areas

One of the clearest results of our evaluation is that the combined field agents in each state had a larger proportion of requests from clients located at lower levels of the school districts than was the case with non-target areas (see Table 5.1).[1] In State A, 79 percent of the target area requests originated with teachers as compared with 44 percent of the non-target requests; in State B, the respective figures were 74 percent and 64 percent; and in State C, 80 percent and 63 percent. Further, in three of the states these differences were owing entirely to the field agents' having more often served elementary teachers (the one exception in State C is agent number 2, who more often served secondary teachers). Thus, it appears that the agents were successful in reaching into the lower ranks of the school systems rather than remaining at the district or intermediate service levels. This differential composition of target and non-target clientele should be borne in mind when making subsequent comparisons between target and non-target personnel.

---

[1] In this and subsequent tables of the present chapter, SEA and college or university requesters are omitted.

TABLE 5.1

POSITION OF CLIENTS ACCORDING TO TARGET AND NON-TARGET AREAS*

	State A		State B		State C	
	Target (Field Agents)	Non-Target	Target (Field Agents)	Non-Target	Target (Field Agents)	Non-Target
School level staff	79%	44%	74%	64%	79%	63%
Teachers	61	24	45	34	44	46
Administrators, specialists	18	20	29	30	35	17
District level staff	7	53	18	24	18	37
Intermediate level staff	14	3	8	12	3	--
	100%	100%	100%	100%	100%	100%
N	(67)	(68)	(155)	(136)	(114)	(24)

*SEA staff and all requesters who were not teachers, administrators or specialists are omitted from this table.

In States A and B, the tendency to deal more often with classroom teachers was primarily due to a single agent in each state; and in State C it was due to three of the four agents located there.[1] *These are precisely the agents who were formerly teachers themselves*. Thus, as mentioned in the preceding chapter, the agents tended to gravitate to clients whose positions were similar to their own backgrounds. The percentages of requests from clients in different positions for *each* of the agents are shown in Table 5.2.

These statistics suggest the advisability of combining former teachers and former administrators into field agent *teams* so that an extension system will obtain optimal coverage. If a team effort is not feasible, then it would seem to be more important to hire a former teacher. Administrators and specialists are more inclined to order information on their own initiative, and this is especially true of personnel located at the district level. More than half (53 percent) of the non-target requests in State A stemmed from district level staff. In the other two states, the figures were 24 percent and 37 percent. Quite obviously, district level personnel were over-represented among the non-target requesters.

Owing to differences in the positions of target and non-target clientele, we also found that the field agents' clientele tended to exhibit lower levels of educational attainment in States A and C (see Table 5.3). This would suggest that non-target requesters in these

---

[1] One of the Pilot State field agents in State C procured the services of an assistant.

TABLE 5.2

POSITION OF CLIENT ACCORDING TO FIELD AGENT OR NON-TARGET LOCATION*

	State A			State B			State C			
	Field Agent			Field Agent				Field Agent		
	1	2	Non-Target	1	2	Non-Target	1**	2	3	Non-Target
School level										
Instructional staff:										
Kindergarten - sixth	60%	9%	7%	22%	11%	15%	20%	18%	33%	23%
Junior - senior	16	27	15	36	21	17	14	32	19	15
Grade unknown	3	--	--	--	--	1	2	--	--	4
Principal, assistant principal	3	18	13	15	11	15	38	39	16	4
Other administrators, specialists	5	9	7	15	15	15	4	4	3	12
District level										
Superintendent, assistant Superintendent	3	3	6	7	6	7	6	--	5	4
Other administrators, specialists	5	3	45	1	20	17	16	4	16	38
Intermediate level (IED, county)	--	27	3	3	13	13	--	4	8	--
All other (students, school boards, etc.)	5	3	4	--	3	1	--	--	--	--
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
N	(37)	(33)	(71)	(73)	(85)	(141)	(50)	(28)	(37)	(26)

---

[*] SEA and college or university requesters are omitted from this and all subsequent tables in the present chapter.

[**] Includes the original field agent and his assistant.

TABLE 5.3

EDUCATIONAL ATTAINMENT OF CLIENTS, ACCORDING TO TARGET AND NON-TARGET LOCATION

	State A		State B		State C	
Educational Attainment	Target (Field Agents)	Non-Target	Target (Field Agents)	Non-Target	Target (Field Agents)	Non-Target
College or less	52%	27%	27%	26%	51%	42%
College plus credits	13	5	6	8	6	--
Master's degree	32	56	60	57	40	39
Beyond Master's	3	12	7	9	3	19
	100%	100%	100%	100%	100%	100%
N	(66)	(66)	(147)	(141)	(108)	(26)

states were better equipped to read, absorb and utilize the information retrieved for them. Further, especially at the district level, we would assume that the non-target clients were more often self-starters, and therefore more highly motivated to utilize the information when it was finally delivered. Thus, if we find that field agents' clients more often used the information, despite their lower position and lesser education, we can conclude with a good deal of assurance that the field agents contributed a great deal to the impact of the dissemination service. (The extent to which the information was actually utilized by field agents' clients and other clients will be examined in Part VI, Chapter 12, "Outcomes of Field Activities.")

Personal Assistance from Different Sources

That field agents were not available to non-target requesters in the Pilot State Program did not mean that these clients failed to receive some kind of assistance in conjunction with their requests. SEA and other consultants, both local and regional, are available to the vast majority of local educators, and especially to district-level specialists. Nevertheless, it is quite clear from our data that the clients in the target areas received assistance far more often than non-target clients. As seen in Table 5.4, 63 percent of the non-target clients in State A received no assistance from any source, 61 percent in State B received no assistance, and 48 percent in State C received no assistance.[1] Comparable figures for the clients in target areas, however,

---

[1] See questions 15a., 16, 17 and 18 in the questionnaire designed for clients. Note that "assistance" is quite broadly defined as any (cont.)

TABLE 5.4

PROPORTION RECEIVING ASSISTANCE AT ANY TIME AND SOURCE OF ASSISTANCE, ACCORDING TO TARGET VERSUS NON-TARGET LOCATION

	State A		State B		State C	
Source of Assistance	Target (Field Agents)	Non-Target	Target (Field Agents)	Non-Target	Target (Field Agents)*	Non-Target
Field Agent						
Alone	48%	5%	47%	1%	40%	--%
With SEA only	7	9	9	--	6	--
With Other only	10	14	4	1	6	--
With SEA and Other	--	1	--	--	6	--
SEA only	5	9	6	22	6	26
Other only	3	14	5	10	18	26
SEA and Other	--	5	2	5	3	--
No assistance	27	63	27	61	15	48
	100%	100%	100%	100%	100%	100%
Sub-Total N	(59)	(65)	(129)	(126)	(109)	(23)
Source of assistance not known	(11)	(10)	(29)	(15)	(7)	(3)
Total percent receiving assistance	73%	45%	73%	45%	85%	58%
Total N	(70)	(75)	(158)	(141)	(116)	(26)

---

*Includes assistant to Agent C-1.

are only 27 percent, 27 percent and 15 percent, respectively, in the three states. Moreover, the percentage *differences* between target and non-target clients with respect to having been rendered assistance are virtually the same within each state: State A, 37 percent; State B, 34 percent; and State C, 33 percent. (It will be noticed that a few non-target clients in States A and B were assisted by the Pilot State field agents. These clients were located in districts adjacent to the original target areas.)

Despite the fact that non-target clients, owing to their higher organizational positions, had greater access to educational specialists or consultants than did the clients of field agents, the absence of the field agents was compensated for to only a limited extent. Thus, while the non-target clients did in fact more often receive assistance from SEA and other sources, *a considerably greater proportion did not receive any assistance whatsoever*.

The three states were quite similar with respect to the proportion of target area clients who received assistance from persons *other* than field agents. The one exception is due to the large proportion (39 percent) of C-1's clients who were helped by "other only." The explanation for this percentage is that the clients were referring to the *assistant* of this particular field agent. In effect, then, these clients were referring to a "field agent." (See Table 5.5 for a breakdown by each field agent.) Thus, the extent to which the target clients

---

contact with information specialists or consultants in connection with the client's request for information. As we will see shortly, in virtually all cases of client contact, the agents rendered *some* form of real assistance, if only to help the client specify his information need.

TABLE 5.5

PROPORTION RECEIVING ASSISTANCE AT ANY TIME AND SOURCE OF ASSISTANCE, ACCORDING TO FIELD AGENT AND NON-TARGET LOCATION

	State A			State B			State C			
	Field Agent			Field Agent			Field Agent			
Source of Assistance	1	2	Non-Target	1	2	Non-Target	1*	2	3	Non-Target
Field Agent										
Alone	45%	50%	5%	58%	36%	1%	31%	26%	67%	--
With SEA only	7	7	9	12	5	--	2	15	6	--
With Other only	7	13	14	2	1	1	8	4	3	--
With SEA and Other	--	--	1	--	--	--	2	22	--	--
SEA only	3	7	9	5	8	22	2	18	--	26
Other only	3	3	14	2	8	10	39	--	3	26
SEA and Other	--	--	5	--	5	5	4	--	3	--
No assistance	10	20	63	17	37	61	12	15	18	48
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Sub-Total N	(29)	(30)	(65)	(65)	(64)	(126)	(49)	(27)	(33)	(23)
Source of assistance not known	(8)	(3)	(10)	(8)	(21)	(15)	(2)	(1)	(4)	(3)
Total percent receiving assistance	73%	82%	45%	85%	72%	45%	88%	86%	84%	58%
Total N	(37)	(33)	(75)	(73)	(85)	(141)	(51)	(28)	(37)	(26)

---

*Combines two field agents, namely, the original Pilot State agent and his assistant.

were assisted by persons other than the field agents was almost exactly the same in the three states, namely, about 25 percent.

It will be recalled that one of the goals of the projects was to call upon technical assistance in order to provide substantive back-up for the work of the agents. To what extent, then, were other consultants involved in conjunction with the field agent? This practice seems to have occurred in only a minority of cases: 13 to 18 percent of the clients in the seven target areas were rendered assistance in addition to their contacts with field agents.

Overall, SEA assistance (with or without field agent help) was rendered to the following proportions of clients within the target areas of the three states: State A, 12 percent; State B, 17 percent; and State C, 21 percent. "Other" consultants, including university or college personnel, intermediate agency personnel and district level staff, rendered assistance within the target areas to the following extent: State A, 13 percent; State B, 11 percent; and State C, 33 percent. (The high proportion in State C has already been explained in terms of Field Agent C-1's aide.) In short, "other" consultants were used about as frequently as SEA personnel.

Only rarely, however, did these "other" consultants include university or college personnel. As mentioned earlier, there was some difficulty encountered in obtaining direct personal assistance for clients from universities or colleges, largely owing to the expense of consultation fees. Since this cost was not specifically budgeted in any of the three states, higher education personnel were infrequently utilized for direct help.[1] The extent to which clients in the target areas received consultation from university or college personnel was: State A, 4 percent; State B, 4 percent; and State C, 6 percent.

It might be possible to overcome this low level of utilization in the future by retaining a liaison person in the university or college to perform many of the same roles as our field observers. As we point out in Appendix J, "Formative Evaluation--An Exploration with Case Materials," our observers performed as ombudsmen, informed critics, internal and external project liaison and resource personnel. Further, in the two areas where the observers were themselves staff members of local colleges, they occasionally followed-up on school projects with the help of colleagues or students. (These cases did not necessarily entail a consultative relationship with individual clients of the service and, therefore, were apparently not reported in our questionnaire. Our qualitative data, however, tell us that these observers became implicated in several of the agents' activities.) In any event, it might be helpful to future extension agent programs to have more college or university personnel involved as substantive experts. Also, it would seem that SEA personnel could be used more widely.

To what extent were the agents intensively involved with clients as opposed to engaging in brief encounters? One way to measure involvement is to note the amount of time that the agents spent with clients. Table 5.6 shows the mean number of minutes that the clients reported spending with each of the seven agents in (a) input interaction (before information), and (b) output interaction (after information). The questions on which these statistics are based were the following:

---

[1] This does not mean that other resources of colleges and universities, such as the library, were not used locally by the field agents. This practice is pointed out elsewhere in the report.

> About how much time did the aforementioned individual spend with you:
>
> 1. In trying to understand or specify your need or problem before requesting information? ___ hours ___ minutes
> 2. In helping you interpret or use the information after if was received? ___ hours ___ minutes

On the average, four of the field agents spent more than an hour with clients before requesting information, two spent almost an hour, and the other spent three-quarters of an hour. To our mind, these are rather high figures and might be exaggerated. Due to the normal tendency to report time in multiples of an hour, many clients who spent less than an hour with the agents might have inflated their estimates.

Time spent with clients in the output interaction phase was generally less than time spent in the input interaction phase. After delivering information, only two of the agents spent more than an hour, two spent almost an hour, one spent three-quarters of an hour, and two spent only about one-third of an hour, on the average. It is important to note, however, that approximately the same number of clients spent some time with the agents in the input and output phases. (This fact can be seen by comparing the base numbers of the percentages.) Thus, the opportunity for interaction was about the same, but the amount of time spent after delivery was less for five of the agents. Only two agents, then (A-2 and C-1), spent approximately the same amount of time, on the average, before and after delivery. And interestingly enough, these were

TABLE 5.6

TIME SPENT WITH CLIENTS BY FIELD AGENTS
(Mean Number of Minutes)

	State A		State B		State C			
	Field Agents		Field Agents		Field Agents			
	1	2	1	2	1a.	1b.*	2	3
Input interaction (Before information)	57	74	64	44	54	94	77	71
N	(29)	(26)	(66)	(67)	(13)	(6)	(23)	(33)
Output interaction (After information)	23	85	46	22	57	52	61	52
N	(31)	(27)	(60)	(65)	(14)	(6)	(24)	(31)

---

*Assistant to original field agent.

among the three agents who more often served district or intermediate level personnel. Thus, it appears that curriculum and instructional specialists were more often favored with assistance in output interaction than were teachers. As noted in the preceding chapter, several agents reported spending more time with administrators because of the latter's disinclination to order or read fiche.

In general, however, the reports of clients indicate a good deal of intensive interaction between field agents and their clients in the Pilot State Program. By no means were the agents acting simply as messenger or retrieval persons. Not only was some form of assistance rendered in a substantial percentage of cases, but clients received generous portions of the agents' time.

While the number of clients who received assistance from different types of non-field agent consultants is too small to compute time spent with these consultants, our impressions of the data are that SEA consultants spent less time with the clients than did the field agents. This is not too surprising in view of the fact that SEA consultants were mainly brought into the picture after information was delivered (or in conjunction with the retrieval of information). The field agents, on the other hand, always spent some time before the retrieval of information.

Now let us turn to an examination of the specific activities performed by the agents and the client's evaluation of the agent's performance.

Activities and Traits of Field Agents and the Clients' Evaluations

Nine facets of the field agents' role were submitted to the clients for their appraisal on a scale from 1 (poor) to 5 (excellent). In addition, the clients were given the options of checking "can't judge because did not occur" and "don't recall. The proportion who actually rated each of the agents (omitting from the base those who could not recall) will be taken as a measure of how often certain activities or traits were experienced. These statistics are shown in Table 5.7.

Virtually all of the clients reported that the agents had sought to explain the information service, tried to understand their problem or need, communicated in general, and interacted with them sufficiently to show whether they understood their role. Since these are activities or traits which are inherent in the very nature of an extension agent program, it is not surprising that almost all clients reported exposure to them.

When we move to the question of the agent's expert knowledge, we find somewhat lower levels of perception. Seventy to 100 percent of the clients felt that they could not judge the agent's knowledge of the

TABLE 5.7

PROPORTION OF CLIENTS WHO PERCEIVED SELECTED FIELD AGENT TRAITS OR ACTIVITIES

	State A		State B		State C		
	Field Agent		Field Agent		Field Agent		
Traits or Activities	1	2	1	2	1*	2	3
Ability to explain clearly the purpose and services of the information program	100%	93%	99%	97%	100%	100%	100%
Initial understanding of the problem or need which I presented	100	93	100	97	100	100	100
Ability to communicate in general	100	96	100	98	100	100	100
Understanding of his role or job	97	97	96	92	100	100	97
Expert knowledge of the problems and concerns of education	88	85	97	70	100	95	86
Availability when I wanted to see him	78	61	91	89	100	96	88
Further specification, analysis, or diagnosis of my problem or need	83	78	84	75	85	76	81
Helpfulness in interpreting the materials or information which I received	87	62	86	60	87	91	76
Helpfulness in implementing or installing a new practice	52	77	76	33	100	77	78
N**	(29)	(27)	(64)	(70)	(15)	(22)	(31)

*Omits the field agent's assistant because of small N responding.

**N's varied slightly for each item due to variation in proportion who said "don't recall." Therefore, N's at bottom of table are means.

problems and concerns of education. Since the agents were not expected to be substantive experts, this falling off is not surprising.

With regard to the agent's *availability*, we find that sizable minorities of two of the agents' clients were simply unable to judge them on this score. Presumably, the issue of availability had not even arisen for 22 percent of the clients of A-1 and for 36 percent of the clients of A-2. This suggests that the clients of these two agents, both of whom were in the same state, were less concerned about the agents' availability than were those of other agents. This might indicate a certain amount of apathy on the part of school personnel in State A regarding the agents' follow-up services. (The lower return rate of questionnaires from State A reinforces this conclusion.)

The most telling portion of Table 5.7, however, concerns the last three items listed: *specification or diagnosis* of need, *interpreting* information, and helping with *implementation*. As one would expect from our statistics on the amount of time spent by the agents in input and output interaction, implementation activities were experienced less frequently than the single input activity. However, the proportion of clients who were helped in these ways remains generally high.

One agent (B-1) was the lowest of all agents on *all three* of these activities. This was the agent with the highest case load, the implications of which were discussed in the preceding chapter. Another agent (A-1) was also relatively low on one of these activities, namely, "helpfulness in implementing." Only about half of this agent's clients reported some effort on her part to help with implementation. And a third agent (A-2) was relatively low on "interpreting," with only 62 percent of his clients reporting some effort in this direction. If we omit these three exceptions, the agents may be said to have engaged in specification, interpretation and implementation *with 75 percent to 100 percent of their clients*. Overall, then, there was a high rate of agent assistance to school personnel. Now let us turn to the clients' evaluations of these efforts.

As mentioned above, the clients were invited to rate the agents on scales from 1 (poor) to 5 (excellent). Table 5.8 shows the proportion who gave "excellent" ratings on each of the nine traits or activities.[1] And one can see that there was considerable variation among the agents in the judgements of their clientele.

Presentation. The trait which was most highly appraised overall was "understanding of his role or job." Despite early uncertainties about their appropriate role, therefore, within a period of about a year the agents were able to project themselves as being fairly self-assured about their functions.

One agent (C-2) scored quite low on this characteristic, however, as she did on *most* of the characteristics listed. This was the newest agent in the program, having worked only a few months as a replacement for a former agent at the time when our survey commenced. Thus, the ratings of this agent probably reflect her status as a neophyte. Also, this is the one agent who had not attended the two centralized training

---

[1] Because of a strong tendency to give "good marks" to the agents, we will use an excellent rating as our cut-off point for analysis.

TABLE 5.8

PROPORTION OF CLIENTS WHO RATED AGENTS AS "EXCELLENT" ON NINE TRAITS OR ACTIVITIES

	State A		State B		State C		
	Field Agent		Field Agent		Field Agent		
Traits or Activities	1	2	1	2	1*	2	3
Understanding of his role or job	63%	82%	75%	82%	60%	17%	73%
Ability to explain clearly the purpose and services of the information program	61	73	69	74	59	17	61
Ability to communicate in general	68	52	59	66	71	13	71
Availability when I wanted to see him	55	81	45	74	33	44	53
Helpfulness in implementing or installing a new practice	64	65	50	73	42	19	38
Helpfulness in interpreting the materials or information which I received	54	69	48	61	39	14	28
Initial understanding of the problem or need which I presented	43	54	58	63	27	21	24
Expert knowledge of the problems and concerns of education	50	44	42	59	25	15	35
Further specification, analysis, or diagnosis of my problem or need	37	47	42	52	9	--	23
N**	(29)	(27)	(64)	(70)	(15)	(22)	(34)
Mean percent	55%	63%	54%	67%	40%	18%	45%

*Omits the field agent's assistant because of small N responding.

**N's varied slightly for each item due to variation in proportion who said "don't recall." Therefore, N's at bottom of table are means.

sessions. These features remind us of the difficulty of learning and developing an effective style of field agent work within a short period of time. Extensive trial-and-error, special training and other assistance are highly important aids to the beginning field agent.

It should be added that this agent was located in a state where her colleagues also tended to receive rather low client evaluations. This fact can be grasped most clearly by examining the mean percentage of clients who rated each agent as "excellent" on each of the nine traits or activities, shown at the bottom of Table 5.8. Later, in Chapter 11, we will see that the clients of field agents in State C also rated the usefulness of information lower than clients in other states. Further, the assistance of field agents was valued considerably less than the assistance of field agents in the other two states. The rate of utilizing information, however, was about the same among the clients of State C's field agents. Thus, it appears that clients of field agents in State C were generally more difficult to impress either with information or with assistance, although they were no more difficult to motivate. Our interpretation of this result is speculative; but on the basis of qualitative knowledge of the school personnel in State C, it would appear that the clients there were generally more hesitant to give credit to outsiders. In the education field in particular, there was a strong "home rule" ideology shared by school personnel, with consequent tension between the SEA and intermediate centers, on the one hand, and local districts, on the other. A climate of insularity or generalized suspicion, therefore, may have influenced the judgements of field agents in State C.[1]

---

[1] During a meeting of Superintendents, to give just one example of insularity, an administrator referred to certain students and their families as troublesome "outsiders." When asked how long these "outsiders" had been residing in his district, he replied "seven years."

Two other traits which tended to be highly praised by the clients were "ability to explain clearly the purpose and services of the information program" and "ability to communicate in general." The ability to explain the service was rated at least third in order of excellence for five of the agents, and the ability to communicate was rated at least third for four of the agents. In short, the three traits which are essential to field agent work in its earliest phase of development--understanding of one's role, explaining the service and communicating--were rated the highest. These aspects of the agent's role might be characterized as being concerned with presentation of self or the program. Clearly, by the time of our survey most of the agents were able to impress the great majority of their clients with their ability to present themselves and the service. (Nor should the reader assume that this achievement was an easy feat, as already discussed in Chapter 2.)

Availability. Clients' judgements of availability reveal considerable variation. Two of the agents (A-2 and B-2) were rated excellent by 74 percent and 84 percent of their clients, respectively. On the other hand, three agents were rated this high by less than half of their clients, and two by only about half. Since neither size of the agents' territory nor case load is related to these ratings, we must search for other factors. Perhaps the agents who were viewed as less available had become over-involved with certain projects or clients, which left them little time for the generality of information users. Over-involvement has been a difficult dimension to measure, however (see the discussion in Chapter 4). Thus, while we are presently unable to explain the wide variation in ratings of availability, it is plainly a matter which deserves the closest attention of future project managers. For if an agent is viewed as unavailable for follow-up work, clients might lose their initial impetus to utilize information and assume that the field agent is sheerly a messenger boy.

Implementation. It is of considerable credit to the Pilot State system that helpfulness in implementing or installing a new practice was rated as highly as it was. Half to almost three-quarters of the clients of four agents appraised them as excellent on this score. And even in State C, where the agents generally tended to be rated lower, about 40 percent of the clients of agents C-1 and C-3 viewed the assistance of the agents in implementation as excellent. Further, in the case of five of the agents, implementation received higher ratings than the relatively simple activity of "initial understanding of the problem or need which I presented."

As suggested in the preceding chapter, the agents with higher case loads probably chose to work with clients who showed some promise of sustained interest in ultimately using the information. Thus, the agents' ratings on implementation are very likely a function of client selectivity. With this caveat in mind, it appears that the agents were often successful in their role of helping clients to follow-through on their information requests.[1]

Interpretation. An aspect of the agent's role which is closely related to implementation is helping the client to interpret information. This aspect too received rather high marks. In the case of four agents, about half or more of their clients judged their interpretive skills to be excellent. However, a greater proportion of each agent's clientele gave a rating of excellence to helping with implementation.

---

[1] As we will see in Chapter 12 , this conclusion is confirmed by data on actual implementation.

Expert knowledge. The lower ratings on interpretation are probably explained by the agents' lack of expertise in the substantive topics of requests. Indeed, "expert knowledge of the problems and concerns of education" was judged excellent by a smaller proportion of clients than any of the activities thus far discussed for five of the seven agents, and quite low for a sixth (C-2). It is impossible, of course, for field agents to be authorities in the multifarious domains of client needs. This finding, then, is hardly surprising; and in fact lends some credibility to the clients' relative ratings of these nine role facets. Moreover, the agent who received the highest rating for expertise (B-2) was in actuality more knowledgeable about education--he had been a Superintendent and a professor of education, and was the oldest of the agents.

But the main conclusion to be drawn from the judgements of expertise is that technical assistance by substantive experts is also needed in an extension system. Earlier we saw the extent to which assistance by consultants had been provided in the Pilot State Program and surmised that it could usefully be increased.

Probing. The low ratings of the last item in Table 5.8--"further specification, analysis, or diagnosis of my problem or need"--are not especially surprising either. As we discussed at length in Chapter 2, diagnosis was one of the most difficult tasks of the agents, and several virtually gave up the attemp The statistics, therefore, support our qualitative conclusions.

* * *

While there is considerable consistency across the several agents in the rankings of these nine traits or activities according to frequency of "excellent" ratings, there is sufficient variation to warrant some separate attention. Table 5.9 shows the rankings of each item for each agent with respect to clients' judgements. While we will not pause here to examine these rankings in detail, it is clear that the agents had different strengths and weaknesses. Thus, while the ability to communicate ranked lower in the repertoires of agents A-2 and C-2 than other traits, the former agent excelled all others in availability and the latter received her highest marks for availability. Similar observations could be made for other role facets. The policy conclusion to be drawn from this presentation is that agents should be combined so that the strengths of one will compensate for the weaknesses of the other. If such agents are aware of their merits and demerits, then they can coordinate their activities so that clients will be exposed to the best efforts of each.

The Quality-Occurrence Typology

In the previous section, we discussed two major dimensions of various aspects of the field agent's role--their occurrence and their quality. If we classify the nine role aspects according to both of these dimensions simultaneously, we are able to determine whether occurrence, quality, or both needs to be enhanced. Table 5.10 presents this classification.

TABLE 5.9

RANKINGS OF NINE TRAITS OR ACTIVITIES FOR EACH FIELD AGENT ACCORDING TO PROPORTION OF CLIENTS WHO JUDGED "EXCELLENT"

	State A		State B		State C		
	Field Agent		Field Agent		Field Agent		
Traits or Activities	1	2	1	2	1*	2	3
Understanding of his role or job	3	1	1	1	2	4.5	1
Ability to explain clearly the purpose and services of the information program	4	3	2	2.5	3	4.5	3
Ability to communicate in general	1	7	3	4	1	7	2
Availability when I wanted to see him	5	2	7	2.5	6	1	4
Helpfulness in implementing or installing a new practice	2	5	5	3	4	3	5
Helpfulness in interpreting the materials or information which I received	6	4	6	6	5	6	7
Initial understanding of the problem or need which I presented	8	6	4	5	7	2	8
Expert knowledge of the problems and concerns of education	7	9	8.5	8	8	5	6
Further specification, analysis, or diagnosis of my problem or need	9	8	8.5	9	9	8	9

*Omits the field agent's assistant because of small N responding.

TABLE 5.10

A CLASSIFICATION OF TRAITS OR ACTIVITIES OF FIELD AGENTS ACCORDING TO "QUALITY" OR "OCCURRENCE"

	QUALITY	
OCCURRENCE	High (51% to 100% of clients indicating "excellent")	Low (0% to 50% of clients indicating "excellent")
High (90% to 100% of clients indicating occurrence)	[A] Explaining service (6)* Communication (6) Understanding of role (5) Understanding need (3) PRESENTATION	[B] Understanding need (4) Availability (3) Expertise knowledge (3) POTENTIAL
Low (33% to 89% of clients indicating occurrence)	[C] Availability (4) Interpreting (3) Implementing (3) FOLLOW-UP	[D] Specification and diagnosis (6) Interpreting (3) Implementing (3) PROBING AND FOLLOW-UP

---

*The number in parentheses is the number of agents who were rated on this item in the manner indicated by the typology.

Each role aspect was placed into one of the quadrants in Table 5.10 according to whether the clients of three or more agents indicated similarly that it occurred more or less frequently, and similarly judged the aspect highly or not so highly. (The number of agents thus rated is shown in parentheses.) For example, more than 90 percent of the clients of six agents indicated that they tried to explain the service, and more than 50 percent rated these six agents "excellent" on this activity. Thus, "explaining the service" was placed into quadrant A, for it is both high on occurrence and high on quality. (Cutting points on the two dimensions were selected so that the number of role aspects would be distributed roughly equally among the four quadrants. Thus, the placement of an item as high or low is relative to all other items.) It will be seen that certain natural groupings of role aspects emerged from this classification.

Quadrant A (high quality-high occurrence) contains mostly those items which reflect presentation of self and service. Quadrant B (low quality-high occurrence) contains items that signify the potential of the service or agent, i.e., availability, expertise and initial understanding of need. For an optimal extension system, these role aspects should be promoted to quadrant A, that is, increased in quality.

Quadrant C (high quality-low occurrence) contains items that signify follow-up activities. These role aspects need to be promoted in occurrence.

Finally, quadrant D contains probing and, for some agents, also follow-up activities. These aspects should be increased in both occurrence and quality. This conclusion is especially appropriate for probing efforts as signified by the number of agents who were rated relatively low on both occurrence and quality of these activities.

If these results are generalizable to other extension agent programs--and their face validity would seem to support such a conclusion--then not only should the present project be altered in the ways suggested, but future project management and training should take similar steps to insure the best possible educational extension system. This is not to say that the present pilot program has been unsuccessful in the area of field agent performance. On the contrary, the program merits the distinction of a highly successful tryout, as suggested by clients' evaluations. Much more will be said on this subject later.

PART III

THE INFORMATION RETRIEVAL PROCESS

CHAPTER 6

ESTABLISHING AN INFORMATION RETRIEVAL CENTER -- PROBLEMS AND SOLUTIONS

Experiences of the pilot states provided the basis for analysis of the problems likely to be encountered in establishing a retrieval service. Energy, ingenuity and unflagging effort characterized the retrieval personnel of the three pilot states as they met these problems and attempted to work out solutions; but, in general, these issues were encountered and dealt with on an _ad hoc_ basis. Understandably enough, what would be the basic and most problematic issues to be confronted in setting up a state educational information service could only be partially foreseen and not very clearly outlined at the beginning of the project. But consideration of their experiences makes possible the delineation of such issues, so that problems can be anticipated and perhaps avoided for similar undertakings in the future, which is the purpose of any pilot project.

Four major issues are addressed: (1) solving computer-related problems (turnaround, adequacy of materials, use of packages, cost, manual _vs_ computer searches, and the QUERY program); (2) furnishing clients with complete copy (microfiche _vs_ hard copy, cost and microfiche hardware); (3) record keeping and filing; and (4) staffing. In addition the specific issues of consultant use, selective dissemination, "promising practices" dissemination, and screening of computer output will be assayed.

Computer Related Problems

The objective of establishing a computerized information retrieval capability for the information service in each state presented the most time-consuming and expensive difficulties during the initial year of the project.

Turnaround Time

The two western states in the project used a large regional computerized information retrieval center initially, instead of furnishing their own searches. Both states expressed satisfaction with their relationship with the regional center and commented favorably on its various services. State B in particular emphasized that they were relatively pleased with the regional center. But observation of this arrangment led the evaluation team to the judgment that not having control over all the steps involved in the computerized retrieval process created some special problems.

One of the basic issues for any retrieval service is turnaround time. Quantified data revealed that it was a problem for all three pilot states, although only those states using the regional center service voiced concern on the issue during the project. The director of State B anticipated this difficulty very early. He sent two test requests for information to the regional center before his state's project was officially underway and did not get a return for three weeks. This led State B in the earliest phases of its project to plan to provide computerized searches within their own state (although they did not become operational until well into the second year of the project). That state's later experiences with the regional center supplied continuing justification for this decision. In the early weeks of the project, their average turnaround time on requests for information referred to the regional center for a search of ERIC was 4.7 weeks.*

The lengthy turnaround was true only for requests referred to the regional center. Requests not sent there but handled in the State B retrieval center during those particular weeks, when the volume of requests was still relatively low, received literally same-day service--or, for a request received on Friday, information would be returned on Monday.

The same story held true in State C. Average turnaround time for requests referred to the regional center (figured on the basis of dates on the office log sheet for requests received in October) was almost four and a half weeks. Again, requests handled in the state information center, and not sent to the regional center, were answered quickly. Also, the state information center occasionally would send information which it had on hand or could collect to the requester, and then follow this up with the computer printout (the profile of abstracts of documents available in ERIC files on that subject) when it finally arrived.

Thus, in both western states, requests which could be answered with materials available in the information center, through manual searches done in the state library or elsewhere, or by other personal and local efforts of the retrieval staff were serviced more speedily than those answered through computerized searches. But although these locally handled requests received faster service, they were not, of course, answered on the basis of an extensive survey of the vast national pool of educational research, as was intended to be done through computer searches. Also, it is unrealistic to expect reference center staff members to do manual searches of ERIC indexes once the volume of requests reaches a high level.

---

*This was figured on the basis of dates on the office log kept in State A for requests received in October and the first two weeks in November, 1970. There was some improvement in early December--turnaround time for one request was two weeks, and for another under three weeks--but it was not consistent. No request sent to the regional center on or after Friday, December 11, 1970, had been returned by the end of the year. In mid-January, the center closed down altogether.

These figures for States B and C contrasted with an average turnaround time of two and a half weeks for State A in the early stages of the project.[1] However, the figure is not really comparable with those for States B and C, since it is based only on those cases completed -- less than half of the requests received during the period -- and the averages for the other states were based on a much higher proportion of the total load of cases. Although some State A requesters were receiving reasonably fast computerized searches, still the coding required by the computer program slowed down processing, and runs with the program took excessive computer time. States B and C simply forwarded the written request forms to the regional center, and coding for the computer search was done by the staff there.

The regional center shut down its service completely January 14, 1971 for reprogramming. The retrieval center director in State B recalled that there was approximately a month's advance notice that the service would be inoperative for a while (they were closed about three weeks) so that the field agents -- and through them potential users -- could be warned ahead of time. State B continued sending requests to the regional center during that period, allowing the backlog to accumulate there. Meanwhile, the staff in State B did manual searches when possible to answer requests; but the necessity of a shutdown contributed to even lengthier delays in replying to users. In State C, dissatisfaction with the regional center and its turnaround time had already prompted the project staff to provide some alternative methods of answering requests, but resources and supplies for these methods had not yet been received. Thus, during the period of the shutdown, for the majority of the cases, requests for information just could not be filled. Only three of the 63 requests for ERIC searches in January were filled that month. This experience led one retrieval director to point out that any computer center may have to close down on occasion. Anticipating this possibility, a retrieval office might wish to provide some back-up systems.

---

[1] State A's figure come from dates on a log of 43 requests received in December, 1970. The average turnaround was figured only on the basis of the 20 of those 43 requests which had been completed at the time the log was received; of the remaining request, 14 were "in process" and nine were "pending" (had not been started). These were excluded from the calculation since we did not have the final completion date.

After the reprogramming, the regional center modified its method of operation. A great many of the requests for information referred to them were answered with "packages", that is, packets of research abstracts and other materials on a previously prepared listing of topics. The main reason for the new packaged services was the length of time required for the individualized computer searches. These were still performed to answer a request for information if the regional center decided such a search was necessary and that none of the packaged services was applicable or adequate. A one-week turnaround was promised by the regional center for its new packaged services and this was generally achieved.

Although there was some improvement apparent in the time required for servicing requests by the regional center, reports from retrieval personnel in States B and C indicated that individualized computer searches required about three weeks. However, data collected during the second year of the project revealed that turnaround time was an even greater problem in the state providing its own computer searches. Its average turnaround was almost twice that of the two other states. Even when the cases handled by the faster packet service of the regional center were excluded, turnaround for individualized computer searches in those states was significantly less than the average in State A. (These data will be examined in more detail in Chapter 7.) Thus, although the turnaround for individualized searches via the regional service seemed excessive, local computer retrieval did not automatically produce a solution.

Awareness of the turnaround problem led the State B retrieval director to check up on clients' opinion about this point. His conclusion during the first year of operation was that the concern of retrieval specialists about lengthy turnaround time may not be matched by irritation from the clients. Few clients in State B complained or said the service was too slow, even when questioned specifically about it. His impression was later substantiated by data collected from clients by the evaluation team during the second year of the project. Only 14 percent of the clients in States B and C who returned the questionnaire answered that they felt the time required for servicing their request had been "too long." (Twenty-five percent of those in State A felt it had been "too long," however). Clients' reaction to turnaround time will be discussed at greater length in Chapter 13.

Irrelevancy and Inadequacy of Materials

The quality of output is another matter which must inevitably be considered with any computerized retrieval system. States B and C could try to assess the output received, but reliance on a distant computer staff apparently hampered efforts to influence the methods used in the retrieval process or to improve the product.

Most of the returns from the regional center consisted of computer printouts of abstracts (of articles, reports or other documents), supposedly all concerning the subject on which the requester wanted information. These printouts result from a computer search of all the data and research in ERIC. Although theoretically the regional installation could draw on a wider range of resources, any of these abstracts would require manual searches for follow-up, and the center was not required to supply manual searches to the two pilot states (although it did to its other clients). Output from the wider range of sources was included in one of the packaged services which the regional center started offering in the spring, 1971. There were occasional instances when copies of other documents were received for individualized searches, but in general information sent to the pilot states has been restricted to a profile (or printout of abstracts) of ERIC documents. The relevance and adequacy of the output both caused concern. State C throughout the first months of the project voiced repeated criticism about the high percentage of the abstracted articles or documents which seemed irrelevant to the client's interest, while in State B the paucity of research turned up on particular topics was frequently noted.

The regional center included a brief evaluation form with the information delivered to clients which asked them what percentage of the material was pertinent to their request. The return rate was so poor that its results cannot be considered definitive, but one can assume that these forms were more often returned by clients who were satisfied with the service and wanted to support its continuance (which is usual in that type of survey). Thus, it is noteworthy that a compilation of these client evaluations for State C after the first year of operation revealed that 36 percent of the 109 who returned the forms said that less than half of the abstracts on the computer printout they received were pertinent to their request. One of the evaluation team observers in that state had mentioned at a staff meeting in December, 1970, that he had watched a field agent glancing over a profile before returning it to a client and immediately marking off at least 75 percent of the items as obviously irrelevant.

The State B retrieval director after the first year of operation judged that there were no relevant abstracts at all in the printout delivered by the regional center in only about 10 percent of the cases. "There's almost always something that's useful, at least one article," he reported.[1] A tabulation of the 164 evaluation forms of the regional center returned by clients in that state during the first year showed 39 percent rating less than half of the abstracts received as pertinent, which was almost exactly the same percentage as in State C.

---

[1] This comment points up a problem in assessing the value of a computer search by reference to the percentage of abstracts which are relevant. Standards of what is an acceptable percentage may vary according to the nature of the request. On some requests, the computerized search should probably be considered faulty if only half the abstracts are relevant. On another, the computer search might be considered a success if it turned up the single piece of research which had been done on a very specific question or topic, perhaps a hard-to-locate study so that the retrieval staff had been saved hours of manual reference work, regardless of how many other abstracts had been also listed by the computer.

Initially, the retrieval director in State B was quite concerned about several instances in which it seemed that there was no research available in ERIC on a topic. After a random examination of cases in the "closed" file, our observer in that state cited several cases wherein the computerized search of ERIC produced little or nothing of value. A request for reports on ungraded social studies programs for junior high schools, for example, elicited only four articles. Another requester asked for information on two different topics -- computer programs for assisting instruction and performance-contracting as related to intelligence testing; ERIC produced nothing on either topic (although the retrieval center attempted to help the requester through other means). On a request for material on district-wide coordination in rural areas, the return from the regional center included nothing on curriculum coordination, which was the main point of the request.[1]

The retrieval director's concern again was alleviated when he did not encounter the irritation from users which he anticipated. "The clients are not as disappointed on that point as we (the retrieval staff) are. They are just as interested sometimes to learn that there is no research on their topic," he reported.

---

[1] Other examples of requests for which there was simply no material available in ERIC included one on a fairly technical topic, community college vocational programs in automotive air conditioning, which took the retrieval specialist the better part of three days to answer through a series of telephone calls and checking other resources. Another was on the effects of abolishing inter-school athletics -- fortunately one of the retrieval specialists in the office personally knew of a study which had been done on the question and put the field agent in touch with the in-state investigator who had conducted it. A third request which drew a blank from ERIC was on the purpose of the "homeroom."

During the second year of operation, clients were asked in the questionnaire sent them by the evaluation team whether they had problems with the information. (Data from this survey will be discussed more extensively in Chapter 13.) It showed that 32 percent of those clients who had been sent only computer abstracts in State B signified that "the information was not relevant to my problem or need," as did 30 percent of those in State C and 32 percent in State A. Several other possible complaints about the information were listed in the questionnaire. Overall, 23 percent to 42 percent of the clients in each state who had received computerized searches for their requests reported that they had no problems with the information received. Differences between the states on requests serviced only by computer can be readily explained. Thus, while these figures seem to indicate a fairly high level of complaint about the output from computer searches in all states, the percentage was lower for those states serviced by the regional center than for the one state which controlled its own computer facility and apparently attempted to make up for the inadequacy of computer searches with extensive manual service. In summary, the greater problem of irrelevant information from a regional center as contrasted with a local retrieval service seems to have been confined to the early phase of the program.

With topics of research being determined by such a diverse and haphazard collection of factors, not the least influential being the individual curiosity of investigators, the explanation for the inadequacy of these responses to requests may well be that there are surprising gaps in the educational research literature. Or it may be that pertinent research on topics gets lost or is not found by any specific computer search because of faults in the indexing or categorization of materials put into the data bank or on the computer tapes. Personnel in a state retrieval office have little remedial power if the explanation is either of these factors, other than possible long-range effects through the detection of such omissions or defects and making Office of Education officials or others aware of them.

The explanations for disappointing output from computerized retrieval of information may be on a lower level, however. Some other factors which influence the success or failure of such an operation are:

1) The wording of the topic on which information is requested. The requester may have been rather uncertain about what his question was or he may not have articulated it specifically enough even if he had a very clear idea; and the field agent may not have spotted this inadequacy or made up for it. If the retrieval center in the state is ordering the computer search (i.e., coding the information request for the computer), this problem is more likely to be recognized and to be remedied inasmuch as they can call the field agent and get him to recheck with the user on exactly what he wants. If the retrieval center is simply relaying requests to a far-off service, the wording is probably scrutinized less carefully and deficiencies or ambiguities are less likely to be noted. (The effect of specificity of requests from clients is explored in Chapter 7.)

2) The instructions or coding of the order for the computer search. The coder may misinterpret the intent or meaning of the request or may not use the most productive terms in order the search. For example, one request was for information on the rationale for parent-teacher conferences. The regional center used the descriptor "school-community relations" and returned

a listing of articles which were mostly irrelvant to the request. The state reference center director experimented with their new computerized retrieval capability and used the term "parent-teacher conferences." He received in return a listing of twenty articles, all of which looked relevant. A state retrieval office could make similar errors in ordering their own computer searches, but at least they would have some recourse--mistakes might be spotted and a search redone. In an instance like this, if the state staff had not been able to experiment with different descriptors, they might have assumed that the fault was not with the coding of the request but that there was, in fact, no research available on that topic.

In State A where the project used its own computer facility, retrieval personnel responsible for ordering computer searches believed that relevancy of output was almost entirely a result of coding: relevancy may vary from 2 percent to 100 percent depending on deliberate decisions made by the coder in ordering the search. If the retrieval expert suspects there will be little research on the topic of a particular request, instructions for the computer search might be written so as to extract every bit of data that might conceivably bear on the subject, with full awareness that in so doing a good many useless and irrelevant listings will be cited as well. In another case, the staff member might be aware that a great deal of research had been done on the topic and that the aim of coding, therefore, would be to limit the output in advance by instructing the computer to list only items fitting very specific definitions.

Whatever the explanation, irrelevance and inadequacy of the output from computer searches is a matter which must be a constant concern to retrieval personnel. Computerized retrieval of information is a new and rapidly changing field, and data from the survey of the pilot states indicate that the quality of the material delivered poses problems both for states serviced by a large regional installation and for the state which attempted initially to develop its own expertise in this area. Experts are not created overnight; and totally aside from insuring quality of computerized output, the problems of producing output initially at an economical cost are formidable (as will be discussed in more detail later). Thus, there are strong arguments for using previously existing computerized retrieval facilities when starting an information service. On the other hand, one may question whether it will be economically feasible for a regional installation with big-volume business and far-distant clients to take the steps necessary for clarifying and specifying requests which are probably a prerequisite for improved quality of output. And the local retrieval staff receiving the output is grossly handicapped in tackling the problem of quality of material because they are unable to monitor the entire retrieval process. Even though an information center providing its own computerized retrieval may have difficulties in insuring the relevance and adequacy of its product, it can at least take the steps necessary for improvement, while an office not controlling its own computer searches has little hope of taking remedial action. As one of the pilot state retrieval directors succinctly concluded, retrieval and computer people need daily personal communication.

Pre-packaged Information

In the early months of 1971 regional center administrators visited the retrieval offices in the two pilot states to explain and "sell" the new packaged services they were to start offering. Given the record to that point, both states might have been disinclined to continue the regional center service, but--primarily because of these new packaged services--both decided to continue, on a paying basis. The new services were:

1) Packets containing selected materials on high interest topics, a combination of ERIC abstracts and xeroxed articles from current journals. These packets provided "survey-type background information" on topics such as accountability, behavioral objectives and individualized instruction, topics which had been the subject of numerous requests for information received in recent years.

2) Packets of ERIC abstracts in a specific subject or grade level area: art education, early childhood education, elementary school counseling, and so forth.

3) A quarterly review of the most recent ERIC abstracts in a particular area. There were 30 titles or categories defined and listed in the quarterly review. Once an individual was identified as interested in information in one of these areas or categories, he was automatically sent abstracts of the more recent ERIC reports in that area each quarter. Examples of the categories were educational facilities, educational finance and language arts. In a way, the service was similar to subscribing to a specialized professional journal.

These services were essentially pre-packaged materials on various topics stacked on the shelf, "waiting for order" in one retrieval director's words. State B attempted to buy only the packaged services--or to get one copy of every package developed which they might then duplicate themselves--

but the regional center refused. Obviously, the regional service hoped to subsidize its expensive and time-consuming individual computer searches with the new pre-packaged services. The regional center itself determined which requests were answered through individual searches and which by packages. During the period of the survey in the second year, approximately 40 percent of the requests in each of the states which had regional service continued to receive an individualized computer search. About half of the requests in each state were serviced with a packet, sometimes in combination with other types of searches. Information on the new services -- on how to order the packets and on all the packet topics -- was widely disseminated to both field agents and clients, especially in State C. Approximately one-fifth of the requests in State B and more than one-third of the requests received in State C during the survey period, which occurred about ten months after the regional center had begun supplying packages, were orders for specific packets.

Project personnel in both states considered the packaged services to be excellent, at least when they were first introduced. Although in the beginning delivery of the packets took three weeks (as long as the individualized searches), within a few months both states reported that the regional center was meeting its promise of one-week service on the packages. Faster service had been the most emphasized selling point of the modified basis of operation for the regional center.

Still, it should be noted that there are points of concern about packaged information.[1] Even though packages were rated very high on quality of materials and research included about a topic, requests for information answered in this way do not receive quite as much individual service and "tailoring" as those answered by a separate search. Another continuing concern is how frequently the packages are updated. The regional center promised that all the packaged services would be updated every two to three months, but retrieval centers answering requests for information with packaged materials need to check constantly to insure that its clients are receiving the most current research on these topics. Finally, and most important, clients given a list of topics on which information is available are being approached in an entirely different way than clients who are urged to define their problems or needs for information with promises of research information or other assistance which might be beneficial to them. To a large extent, the problem or need is defined by the range of available packages, rather than by the individual client. To be sure, both in-depth searches and packages can be used at the same time. Also, a retrieval center doing its own searches is likely to attempt to develop its own package to answer an oft-repeated request in its locality, or at least to economize and streamline its operations by not duplicating a recently done search.

---

[1] In Chapter 13 we relate the provision of packages to measures of client satisfaction and utilization. Here we wish only to raise certain general issues.

One way of insuring that clients who receive packages will be given more individualized attention later on would be to keep a detailed record of the "information request career" of each client, and to review these careers periodically. This procedure would allow the retrieval staff to determine the appropriate time for following-up (either with a visit from the field agent or by correspondence) to prompt the client to consider further services tailored more specifically to his need.

In any event, project staffs in the states found that the new packages were well received by clients and frequently requested. By the end of the second year, however, State B had achieved a cost-per-search at its own computerized retrieval facility sufficiently low to become independent of the regional installation. In doing so, it emphasized individualized searches and gave up the packaged services. Even though the decision was in part economically dictated -- they wanted to control their own computerized searches and could not afford to pay for both their own installation and for service from the regional center, and could not purchase only the packet service of the regional center -- they also had had doubts about the ultimate usefulness of packet service on a large scale.

Cost

Cost-per-request figures for an information retrieval operation, rather than representing concrete, indisputable facts, are one of those budgetary fictions which can be computed in a variety of ways and are subject to varying interpretations. One question to be considered is the extent to which cost-per-search figures frequently reported by retrieval offices for computerized services also include the costs of retrieval office handling of the requests (the division of labor on this varies under different arrangements, with retrieval personnel sometimes doing the coding or writing the logic for the search and in other situations the computer center staff taking on these chores to one degree or another). Also, how does one figure the cost-per-search for requests not sent to the computer center but handled in the office through a manual search or those answered by pre-packaged materials?

With this disclaimer aforehand, we have attempted to gather some of the cost figures that have been reported by the pilot states and have been charged by the regional installation during the two-year project.[1]

There is no valid basis for arriving at cost-per-request figures for the regional center service during the initial year since the states did not pay for the service for that period.[2] Presumably, the cost for the across-the- board individual search service would have been higher than that set in the contracts for the second year when much of this service was on a packaged basis. Contracts starting June, 1971, set the price of regional center service for the following six months at $4,500 for State B and $4,200 for State C.

In spite of the difference in the type of service provided, we have attempted some elementary arithmetic to get some sense of what the cost of the computerized retrieval capacity during the initial year might have been to the two western states. Using the volume of requests received in the first part of 1971 (the projects were not well underway before January, 1971, so including previous months would only distort the figure further) their money's worth from the regional service. His admonition to the field agents was followed by a tremendous upsurge in the number of requests relayed to the regional center during May -- the volume of 216 request for that month was more than triple the former average for 1971 of 65 requests per month -- but all but 13 of these were for one of the packets.

---

[1] The evaluation team has not attempted to collect and analyze the extensive budget and financial data necessary to insure that these figures are in any way comparable from state to state. We have included these figures here only to suggest in the most general way the relative cost of providing service with different bases of operation.

[2] One state reported a $15 charge and the other an $8 charge during the first year for clients not legitimately included in the project whose requests were nonetheless relayed by the state retrieval center for servicing by the regional center. We consider these figures to represent charges-per-request, rather than accurately assessed costs-per-request and thus have not used them to calculate what the regional center service would have cost the state during the initial year if it had been paid for.

Late in 1971, State B signed a further contract with the regional center: $6,000 for 600 requests over an indefinite time period. Thus, the cost-per-request basis was clearly established, regardless of whether the service rendered was a packet or an individualized search.

During this period, State B was also investing in the establishment of its own computerized retrieval facility. Although they became operational early in 1971 and could achieve a faster turnaround on individualized searches than what they received from the regional installation, they continued contracting for the regional service because their own cost-per-search figures were so high. Initially, they reported a cost of $40 per search, which was prohibitive under their budget and given their volume of requests. By summer, 1971, this cost was $14 per search; even with this reduction they continued sending the majority of their requests for individualized searches to the regional installation since they had already paid a blanket contract price for the service. The cost-per-search from their in-state facility during the spring, 1972, averaged $5.50. Operating this economically, starting in January, 1972, they handled the majority of their requests through the in-state center. During the following months a constantly decreasing proportion of each month's request volume was referred to the regional installation until by summer, 1972, virtually all requests were handled at their own computer center.

State A, the one pilot state which provided its own computerized services from the outset, has not been able to provide cost-per-search figures. The project director explained that there were so many complexities in assigning total overhead costs to project requests, non-project requests and the state department of education at large that it was not possible to settle on a single cost-per-search figure. A quarterly report for the period ending March 31, 1972, mentioned a charge of $15 per search which would be assessed faculty members and graduate students at state colleges and universities for computerized searches of the ERIC tape.

In general, to the evaluation team, the experiences of States B and C suggest that a state starting an information retrieval operation should not expect dependence on a far distant source for computerized retrieval capacity to prove ultimately satisfactory. The retrieval director of State B concluded that after the beginning stage of a project, there are real advantages in developing one's own system. Realistically, future states setting up such services should probably assume that development of their own computerized capability will be necessary at some point. Thus, they should anticipate from the outset that they must sometime face the issues of obtaining equipment and personnel necessary for achieving that capability and the problems of making it operational, a process that is likely to require some months of effort. The costs and time required for this effort might well make it advisable to opt initially for pre-existing computerized retrieval services from another state or from a regional installation.

Manual Search vs. Computer Utilization

The issue of the quality of material returned to users by an information service obviously involves many more factors than just the mechanics of a computer operation.[1] As retrieval staffs gain experience and handle larger volumes of requests, they begin more and more to discriminate among requests and to develop considerable differentiation of procedures for answering different kinds of requests. For the retrieval office the basic question may boil down to a constant balancing of considerations about the quality of output against considerations of cost.

---

[1] See Chapter 13 for data on the effects of different types of search.

One reference center director wrote in a quarterly progress report that "for general topics, manual searches are too costly and time consuming"; while "for highly restricted or specialized search topics, a manual search is the most efficient method to use."[1] A specific example was a request for information on auditory programs. The user was concerned not with the teaching of the deaf but of hard-of-hearing pupils. This reference center director knew from past experience that there was not much in ERIC on that specific subject and that the results of a computer search were likely to be disappointing, with much of the output concerning deaf children and little pertaining to the rather different problems of teaching those who have only impaired hearing. For this particular request, he decided on a manual search, concentrating especially on doctoral dissertations and master's theses. But such a search required five to seven hours of staff time, so few cases per week could be given such treatment. This director suggested that a retrieval center might well have one person on its staff assigned to do nothing but manual searches; this was not possible for his state given the size of their staff.

Thus, a retrieval center should anticipate the need to make decisions about operational procedures in these terms: which requests can be adequately and most economically answered by computer service and which ones should be answered through manual searches, ignoring the computer; and, if they are going to offer the latter service, how it will be provided?

---

[1] For the relationship between specificity of topic and manual searches, see Chapter 7, Table 7.7.

In State A, as mentioned before, this issue was first confronted by using considerable variation in coding procedures for the computer search, depending on the type of request. Initially their retrieval staff was doing a hand search of CIJE routinely for each request (only ERIC data was on their computer), but a time study prompted them to add this resource to the computer data. Even so, their retrieval staff continued to provide manual services of one sort or another in addition to the computer search in the majority of cases. Their retrieval director reported that staff members checked Education Index and did a manual search of materials in their own office files in about three-fourths of their cases. She estimated that they also checked with SEA consultants in about that proportion of the cases. An arrangement was made with the State Library to handle cases which required only manual reference work, and approximately one-fifth of their requests were so referred.

Operational decisions on this issue will likely change from time to time. As the volume of requests increases, a retrieval center will probably become less able to offer the kind of service implied by manual searches because of the necessity of handling all requests faster and more routinely. The solution might lie in the enlargement of the staff to cope with the bigger volume and the specialization that this might allow for staff members, or in arrangements with other institutions which might provide the service. Also, operational factors may be changed by the addition of new sources of data to the computer.

Judgements on the issue of manual versus computerized retrieval of information, while they vary according to the situation and capacities of each retrieval center, ultimately rely on the technology currently available, and this is in a stage of tremendous development. Given the best programs now available for computerized retrieval of information and the best possible operation of these programs, requests of a highly specific or technical nature may as yet be more economically and efficiently serviced through a manual search than through a computer search. But as soon as new programs are developed or current ones improved, the point at which that line is drawn will have to be reassessed. (Effects of different types of search on client satisfaction and utilization are discussed in Chapter 13.)

The QUERY Program

Our earlier conclusion that reliance on distant computerized searches will ultimately prove unsatisfactory does not mean that setting up a local system will be easy sledding. Consider the computer program to be used.

As previously mentioned, State B decided before their field agents started work that the state should purchase the QUERY program and develop its own computerized retrieval capability. They expected to be operational by December, 1970, although they had several more months after that of "free" service from the regional center available. But after the QUERY tapes arrived and were installed, they discovered in January, 1971, that their own cost was $40 per search. At a meeting in March, staff members reported to their project director that they had only nine returns out of their most recent batch of 12 requests. Although the turnaround time for individualized searches on their own computer (which is a part of that state's computerized system for school statistics and data) was only one week, the director reported "we're certainly far from achieving the depth in coverage that's coming out of the regional center." One staff member explained her opposition to using their QUERY package "as it exists now" in economic terms: "we've already spent $975 this month. It costs us $600 to run 15 searches...The current package ties up the entire computer."

The project staff, working with personnel of the sate board of education computer center, made continual efforts to solve these problems, and by the end of April the cost had been reduced to $15 per search. They aimed to have it further reduced to $7 per search by the summer, but only a slight reduction--to $14 per search--had been achieved by September. State B discovered--as, apparently, do most QUERY users--that a great deal of time and expertise is required to make the program operational and efficient; and that modifications to fit each individual installation are likely to be necessary.

Retrieval operations in State B were not seriously handicapped during this period since they were using the service of the regional center. When they first started their effort to make QUERY workable, the project was not paying for the regional center service. Later State B decided to contract for an additional period of regional center service because of its new packaged offerings. During that time there was little reason to use their own computerized retrieval services because they were interested in getting full return from their $4,500 investment for the regional service. If they had not had this outside resource, they would have been under great pressure to make their own facility more efficient. Also, their state computer installation which did the searches was housed in a different building than the retrieval office; the retrieval director felt that progress would have been speeded up if they had been in closer proximity to the computer center personnel, and procedures were established to handle this.

During the second year, the various problems were solved and the State B project staff became enthusiastic about the advantages of controlling their own searches. They switched to a different computer program (OBIAS); and gradually their costs came down to a most realistic $5.50 per search. And they expanded the resources in their computer data base so that it included ERIC, CIJE, AIM and ARM. Their average turnaround remained eight days because searches were done in batches over the weekend in order to keep costs low. Their retrieval director became convinced during a workshop at the regional center of the importance of having immediate access to the translator (coder) to insure clarity in the translation of the request into instructions to the computer. The retrieval staff started writing the instructions for the computer searches at their own installation, and the State B project staff noted improvement in the quality of the output. The field agents and the project director both reported to the evaluation team observer that the in-state searches were better than those from the regional installation and attributed this to the coding done by their retrieval staff. The retrieval staff itself felt they had advantages in being closer to the request, staying in control of the retrieval process, and being able quickly to rectify mistakes: "If the thing does bomb out (a search is unsuccessful), you can immediately change the logic (for the computer search) and try again."

State C, in the spring of 1971, also purchased QUERY and tapes with the ERIC data for a computer in their state. The program was installed in June of that year, but was not working by the end of the project period. A consultant from the contractor held a two-day training program when the program was installed, but the retrieval center director indicated even then that more training on coding techniques and all other aspects of the process was necessary. The experiences of the other two states gave State C the basis for a more realistic assessment of the initial difficulties likely to be encountered with QUERY. In reporting that the program was still not working some months later, the retrieval director said, "but we have a year to do it," referring to their prior purchase of the regional service for the coming year.

However, there was little progress during that year. This state has in general put less emphasis on the retrieval aspects of the project. The retrieval director had no familiarity with computerized processes before the project began and, as the sole professional in charge of the retrieval process, she was already overburdened. Thus, she was completely dependent on their state department of education computer and data processing personnel for development of their in-state capabilities. But cost feasibility studies and other efforts promised to get the program working during the year after its installation "were not forthcoming at all." Thus, State C was totally reliant on the regional center for computerized retrieval throughout the project, and, with a single person staff, they had to use computer searches or packaged services almost totally, rather than manual reference work. In a situation like this, the arrangement with the regional center was imperative for the very existence of the information service.

State A obtained the computer search capability for ERIC before their project began and attempted to supply their own searches with no initial arrangement with another facility. A history of their experiences was probably typical of the difficulties to be encountered with this approach.

First, members of the retrieval staff had to learn how to use QUERY, or how to code requests for the computer. The initial training session by a consultant from the QUERY contractor was judged very good by the two members of the reference center who were attempting to gain this new skill. A few weeks later, at the time of the first site visit of the training team, computer searches were being successfully completed. But searches were taking four to five hours of computer time, according to the new director of that state's computer center. The state department of education had installed a new, faster computer over the summer, which had influenced their decision to develop their own computerized retrieval capability. The computer center director estimated that on their former, slower machine, searches under QUERY would have taken 10 to 12 hours of computer time and that this would have been impossible. Searches on the new machine were possible only because the capacity of the machine was not being fully used as yet and it was a multi-job machine (handling up to seven different jobs simultaneously).

A member of the training team for the pilot states project discussed coding procedures and other specific problems with State A staff members on the first site visit of the training team. This appeared to be an exceedingly helpful session, as reported by a member of the evaluation team. One of the retrieval staff members later judged that the discussion may have been somewhat useful but that the main problem facing her and her colleague at that point was lack of experience. They understood theoretically how to do the coding; what they needed was more practice. Experience did increase the coding efficiency of the operation to some degree; however, they were able to include coding for only four to six searches in a batch which required a minimum of two and one-half hours of computer time. This was far from satisfactory. The field agents were hired rather late -- after the information office had existed for some months. After they began their work, the number of requests for information began to increase significantly. With the higher volume, the information center, even though they had several members on their staff, could not keep up with the demand. Also, even though the staff members became more expert, the laboriousness of the coding procedure was a continuing problem and a serious obstacle to the whole operation of their service. QUERY was operational, but it wasn't efficient.

One of the staff members, in reviewing the first year's developments, observed that the critical fault with QUERY was that the program, as written, was set up so that a request could be very specific about the topic of the search, but that also, unfortunately, the request had to be very specific. Under QUERY, their limitation for an order to the computer was set in terms of the number of lines of instructions: they could send a maximum of 30 lines of instructions (or coding) for each run through the computer (or batch of requests), regardless of how many individual requests (or searches) might be included in that batch. But at that time, each individual request required eight to fifteen lines of coding, which meant that only a few requests could be handled simultaneously within the 30-line limitation. It took a retrieval staff coder about a half hour for each case, in addition to severly curtailing the number of cases which could be included for each computer run. The result was four to six requests included in a batch, at a maximum, with each batch requiring two and one-half hours of computer time at a minimum. State A reported that a detailed time and motion study of the operations of their office in January, 1971, revealed that all steps in the processing of a single request required approximately three hours of staff time.

The State A staff felt that changes for greater efficiency were necessary. Coincidentally, several members of the staff heard a presentation describing modifications which had been made in QUERY at a western ERIC clearinghouse while they were attending an educational conference. Subsequently, State A asked the speaker to come as a consultant and help them with their own QUERY problems. As a result of his modifications in the QUERY tape and in coding procedures, State A was suddenly able to process up to 25 requests per batch in 15 minutes computer time. Coding a single request took about five minutes (compared with a half hour previously), and staff members found they could code a batch of 15 requests in an hour and a half. Each request required only one or two lines of coded instructions generally; thus, many more requests could be included within the 30-line limit per batch.[1]

---

[1] In brief, the coding changes introduced made it possible to code only parts of some words involved in the search topic rather than every letter in the word (e.g., "dary instead of "secondary"), and allowed coding of only non-asterisk terms. (In the coding procedure, asterisk terms are the primary subjects or topics of the request; non-asterisk ones are the subsidiary, less important or more general ones. Previously, the coder frequently had to include the same word preceded by an asterisk and again without an asterisk.) In addition, the new coding instructions specified which ERIC clearinghouse data the computer was to search. Data on the ERIC tape is stored according to the clearinghouse from which it originates, and--although there are some ambiguities or overlap--the clearinghouses are distinguished by the subject of the material. Thus, one can specify the single clearinghouse, or possibly the two or three, which would have research on any particular subject. This change accounted for a big decrease in computer time required per batch, since the computer no longer searched the entirety of its data bank for every search.

Other changes introduced by State A in its operations included obtaining the computer tapes of CIJE (Current Index to Journals in Education) on which they had been previously doing a manual search for every request. Eliminating the manual searching of CIJE cut out approximately one and a half hours of the staff time formerly required in the processing of a request, according to their estimates. But, after installation of CIJE, the computer was not printing out the journal volume number of page number. Staff members had the time-consuming and irritating task of looking up all the identification numbers in the CIJE printed index and copying by hand onto the printout intended for the requester the journal citations for each item. Although they were looking for a way to remedy this, they assumed that the deficiency was a part of the program. But the retrieval director of one of the other pilot states, on a visit to their office, told them it was not; and a staff member, on a visit to the information service in an adjacent state, noticed that volume and page citations were supplied by the computer there. Thus, the State A staff realized that the deficiency was either on their own tape or in the way it was operating, and they began making phone calls -- to the Office of Education in Washington, to the original consultant for the QUERY contractor, to their own computer center director, and to the other pilot state retrieval director. It was the latter who finally enabled them to determine that an instruction card was missing for the CIJE printout program. Again, because of relatively accidental encounters and considerable initiative in trying to find an answer, several minutes of staff time were saved on every request.

Despite the fact that the volume of requests per month did not increase over the first eight months of 1971, the staff of the State A information center was enlarged to include the director of the unit and four professionals plus secretarial help. They reported a new time study done in June, 1971, which showed that, as a result of the changes in operations during the year, the staff time for each case had been cut in half, or down to 90 minutes per request. During the second year, the volume of requests per month was considerably higher. The scope of activities and the personnel under the supervision of the director of the information office was considerably expanded, although the size of the retrieval staff *per se* was not increased.

Experiences of the pilot states suggested to the evaluation team that new information services might be saved months of difficulty and much cost in gaining computerized retrieval capability if advice and consultation were continued long after the installation of the program, or if experts who could solve rather specific operational problems or deficiencies were identified for the new office and available on call. One State A retrieval staff member was dubious about whether they would have benefited from earlier advice from the consultant they finally discovered on their own: "It took us that long to know the changes we wanted to make in the coding." The point that a certain learning period is inevitable for the retrieval staff in gaining new skills is probably valid. Nonetheless, solutions to difficulties in setting up computerized facilities seemed unnecessarily obscure and hard to come by for all three states. The manner in which answers were finally found, as State A's experiences illustrated, was fairly serendipitous: accidentally hearing a speech at an educational conference and the fortuitous questioning of a visitor who was not an expert but a colleague in another state going through the same experience.

One would hope that retrieval staff purchasing QUERY or some other program in the future will not have to follow the same circuitous route to make the program serve him efficiently, but that some of the difficulties can be avoided on the basis of the previous experience of other users.

Furnishing the Client With Complete Copy

Another issue confronting all three states in the project was how to provide complete copy of reports or articles in which a requester decided he was interested after seeing abstracts of them. The various questions which had to be investigated and answered by each state included the following.

Microfiche Copy or Hard (printed) Copy

While there are obvious advantages to providing a requester with a printed copy of an article in which he has indicated interest, technology has yet to make this economically feasible in all cases. In general, the states decided to return microfiche copy. Articles or references resulting from manual searches, as opposed to the computer search, and various other materials and resources were sometimes supplied by xeroxing or other methods of copying. The PREP packages, for example, were duplicated in bulk by two pilot states and made widely available through the information center and field agents. But complete copy of ERIC items was usually obtained in microfiche form because of the high cost of reproducing printed copy, and the field agents had then the additional role of acquainting requesters with new equipment -- the microfiche reader -- and providing it for their use.

Although microfiche collections were available at various institutions in each state, none of the three state retrieval centers had the collection or a microfiche reproducer available in their own offices during the first year. All obtained these for the project office or in cooperation with other branches of the state government during the second year.

In State B, the initial return package from the computer search included a cover sheet listing all the various places in the state, such as state colleges, etc., where either microfiche copy or hard copy for the articles cited on the printout could be obtained. During the first year the retrieval center did not provide complete copy to clients as a general rule, although field agents in the two target districts might get microfiche copy for their requesters. The retrieval center did have a machine for making hard copy from microfiche and supplied this service for SEA personnel. Also, if a client called and said there was no copying facility available or convenient for him to use, the retrieval center would make arrangements to get microfiche copy for him: the state library had the microfiche collection and would send microfiche copy and portable microfiche readers out on loan. During the second year, the project staff increasingly emphasized the use of microfiche copy (along with their emphasis on individualized computer searches). They purchased the microfiche collection and a reproducer so that they were able to supply copy to users. But as their policy grew more successful, problems created by the availability of too few microfiche readers grew more acute.

The State A office during the initial year generally ordered microfiche copy from an adjoining state. (In fact, this was the one service for which they relied upon their neighbor state, although in the original proposal they intended to depend on the other state's existing information service for all of their computerized retrieval capacity.) However, available resources within their own state were utilized in various ways. The school district served by one field agent had the facilities of a microfiche reader-printer (which produced hard copy) and the microfiche collections. A state college for women in the other target district provided similar resources for the field agent there. This field agent scanned the complete copy of the microfiche document and made hard copy of a few pages which she regarded as especially useful. She then delivered these pages with the whole article in microfiche to the requester and explained that other pages could also be copied. She felt that this encouraged the requester to tackle the microfiche reader: the printed pages might pique his interest. Further, while using the reader he could simply check specific pages he wanted to have copied for future reference, thereby having to confront the microfiche reader only once for a given article.

In general, project personnel encountered client resistance to microfiche in varying degrees. But they also found that economics dictated the necessity of its use. They felt that the primary impediment to persuading clients to accept and use the microfiche was the inaccessibility of microfiche readers, and even after two years each state project was still attempting to increase the supply of such readers. One quarterly report at the end of two years stated: "It is difficult to convince clients that microfiche is an excellent method for reviewing documents. They would like hard copy, but as more readers become available, this problem will lessen."

Paying for Complete Copy

The State B staff phrased this issue on the agenda of one of their initial staff meetings as "Fee or free to client?" Since the client in nontarget districts made his own arrangments to get complete copy from the institution nearest him with copying facilities, he paid for it himself. In the target districts, the project furnished microfiche copy to clients through the field agents, one using the facilities of the state library and the other those of the state university.

In State A, complete copy -- whether in microfiche form or in hard copy -- was provided free to clients in the two target districts. Requesters from other school districts in the state had to pay for their copy. In State C the project might pay for one or two pages of hard copy sent to a requester but not for copies of complete articles. After obtaining the microfiche collection, they sent out microfiche copy on loan during the second year. Later that year, they obtained the facility of a microfiche reproducer in conjunction with the state archives. If the user wanted to keep his own microfiche copy after reading the one on loan, they would obtain it for him. In general, clients paid for copies of articles that they requested, although this cost might be covered by the intermediate agency or regional office out of which the field agents operated.

Whatever the answer, or variety of answers, to this question by a state information service, the cost is nominal for documents in microfiche but can mount to several dollars per article for hard copy.

Microfiche Hardware

In the preceding discussion, there were repeated references to the basic microfiche data collection, the microfiche reproducer, the microfiche reader-printer (for producing hard copy) and microfiche readers. The availability of these resources is essential to the functioning of a retrieval office. And although "hardware" might seem to be a mundane issue, or a problem with obvious answers, difficulties related to it caused repeated instances of irritation, frustration or even complete interruption of the whole process of supplying information to clients. One of our observers in the early stages of the project found a retrieval staff director disgusted after his first attempt to provide hard copy of an article with the available microfiche reader-printer. Various field agents voiced dissatisfaction with certain microfiche readers, or reported that since their single microfiche reader was not working and no others were available in the area, none of their clients could read copies of articles. In general, each state had to devote considerable time and effort during the project to determining the availability of equipment, how much additional equipment was needed for effective functioning, where there were funds for obtaining it and whether certain models or brands were preferable.

By the end of the project, each state had obtained the basic equipment necessary for supplying complete copy but, as noted previously, still faced shortages of microfiche readers. Field agents and project personnel urged all schools to purchase their own readers. The effect of the lack of available readers was evident in responses of some clients to the questionnaire of the evaluation team during the second year. An elementary school principal in one target district wrote:

> Between our busy schedule and the inability to schedule a microfiche reader we have been longer than anticipated in reviewing the ERIC data. I will return the questionnaire as soon as possible after we have a microfiche reader.

And a reading clinician in a junior high school, also in a target district, responded:

> I have been most anxious to review the microfiche so efficiently provided me, but the assurances tendered me of an available reader on loan turned out rather badly. I am on a "waiting list" to use the reader; my schedule does not allow me to use those at institutions where they are available...

One State's Experiences

Documentation of difficulties caused by these issues was more available for State C, so experiences of that state might be presented as a kind of case history. This pilot state had not made decisions on these various points until the project was well underway and the field agents' had been at work for some weeks. They perhaps assumed that hard copy of needed articles would be provided by one of the three universities in the state which had the ERIC microfiche collection. In mid-October, they discovered that the cost of this would be prohibitive: the rates charged by the three institutions ranged from 10 to 25 cents per page. Even if there were a slight discount for the project, their budget could not absorb such charges, and few requesters were likely to be willing to pay several dollars for a short article, much less a conceivable $25 for a long government report. State C had on hand at this time a dozen requests for complete copy of articles or reports abstracted in the profiles delivered to clients. The retrieval center director determined that one of the requested reports had been published--but the cost was $19. On the other hand, the state department of education did not have the microfiche collection of ERIC or the capacity to copy microfiche, and the schools in general did not have microfiche readers. The three state universities would not circulate their collections, nor could they copy it in microfiche. Hard copy could be ordered from the national supplier, but this would take a great deal of time for each request and the cost was only slightly lower than the in-state reproduction cost. Thus, State C was caught with a backlog of requests for complete copy and a dilemma about how to service them, since these basic questions had not been answered in advance. Although decisions were finally made, State C field agents had difficulty getting complete copy of an article or report for a requester throughout the first year and were able to deliver complete copy, at least of ERIC materials, in relatively few cases, until the summer of 1971--some nine or ten months after the project had begin and six months after operational decisions had been made.

The combination of dissatisfaction with the regional center service and problems in delivering copies of complete reports or articles (either in hard copy or microfiche) led State C to consider various alternative plans of operation; and at a staff meeting in December, 1970, these alternatives were discussed. In summary, the decisions made then were the following:

1) The Field Agents would have copies (in printed form) of various indexes of educational research: specifically the RIE (for ERIC), CIJE and Pacesetter. Field agents also had PREP kits and would have NCEC materials as they became available. The plan was that the field agents (or their secretaries) would do a manual search as soon as a request for information was received, and that by xeroxing copies of the abstracts listed in sources close at hand would be able to return some pertinent abstracts to their requesters within a very short time.

2) The state department of education, or the state information center of the project, would purchase the complete microfiche collection of ERIC. Thus, they would be able to supply complete copy of documents from their own resources.

3) Field agents will have microfiche readers that could be loaned to requesters who wished to read complete copies of those articles in which they were interested.

4) A fourth decision, finalized later, to purchase the QUERY program and computer tapes of ERIC and CIJE data, has already been mentioned.

But once these decisions were made, the State C team faced what they felt were endless frustrations in putting them into effect. Long negotiations were necessary to work out arrangements for the assignment of a computer suitable for QUERY to the state department of education. Although resources and equipment needed for the new plan of operation were ordered, there were delays in receiving almost every part of it. Even obtaining the printed indexes for the field agents took some months. The purchase of the whole microfiche collection for the state department of education, by state law, had to be let out for bids, even though it was available from only one source in the nation. Since the national contractor was changed at about this time, the original purchase order was returned, and the whole bid-letting procedure had to be gone through a second time before a new order could be sent in.

Most of these problems had been cleared up by summer, 1971. Reports from the state during the second year indicated numerous requests for loan of microfiche copy from the newly acquired collection. The retrieval director reported few problems in getting the microfiche returned after the loan period. Also, as mentioned previously, they obtained use of a microfiche reproducer during the year so that users who requested it could be supplied with their own copy to keep, and extra copies could be made of articles for which there were many requests.

The plan of operation regarding field agent retrieval did not work as envisioned. Even after they received their basic resources, field agents seldom did real searches. Thorough individual searches on a topic were still supplied only by the regional center with its lengthy turnaround time. In practice, the field agents relied more and more on packaged services, looking up what appeared to be relevant categories in the listings of these services supplied by the regional center. Finally, at the beginning of the second year, the three field agents had only one microfiche reader apiece, which was an especially acute problem in a state with target districts encompassing large geographical areas. If the reader was not working or was out on loan to another user, then a requester had to wait a considerable time after his microfiche article had been delivered before reading it. Yet, if the field agents took the machine with them or kept it in their offices, it was not feasible for a client to read a long report or document while the field agent was waiting. The distances traveled by field agents servicing multiple school districts spread over a large area created needs for multiple readers which were even more serious than those faced by agents servicing a single school district or town, or even a county. This state, like the others, actively encouraged all schools, or at least each district, to obtain its own reader.

Record Keeping and Filing

A third major area to which retrieval staffs had to devote considerable attention was that of filing and record keeping. For the most part, they felt it was necessary to determine through their own experiences what systems best served the needs of the project in their state. At various times during the year, each state made some modifications in their filing and record-keeping systems. Again, this may seem a mundane issue worthy of little mental energy, but experiences of the pilot states seem to indicate that it is worth considerable effort -- and even more usefully, considerable forethought and analysis -- because of effects that the systems being used have on efficiency of operation. In several instances retrieval personnel in the pilot states reported how worthwhile it was to add new files or change the way of keeping a former set of files because of the surprising amount of time they saved.

A member of the training team for the pilot states who concentrated on these problems was praised by retrieval personnel. The sessions that he conducted at the first training workship, his consultations with individuals and suggestions about problems that arose, as well as examples of systems used in a retrieval center that he directed--all were cited as most useful.

Although each state devised its own systems and procedures initially, we noted that the different state retrieval offices opted frequently for the same or a very similar solution to a particular problem. This may have resulted from the training team's influence, or from communication among the pilot state--or it may be, as we suspect, that there was one answer which had definite advantages over others.

The basic element that a retrieval office deals with is an individual request for information. Thus, the primary record-keeping system should be in terms of a specific request for information, and not in terms of the requester. (The obverse would be true of a doctor's office, where the basic unit to be serviced is patients, or the whole person and his history, not the current complaint). Record-keeping difficulties seem to result if a particular request is primarily classified according to the person making the request, or the subject on which information may be available or requested, or the nature of the service requested--since persons may make multiple requests, a request may pertain to multiple subjects, and a single case may be serviced in multiple ways.[1] Thus, the best system seems to be the assignment of an identification number to each request, numbering the requests chronologically as they are received by the reference center. (The training team suggested preceding these numbers with the last two digits of the year--e.g., 70--0001, 70--0002,etc., then 71--0182, 71-0183, etc.). Other matters, such as keeping track of the topics of requests or of the requests from each field agent, can be handled by simply cross-referencing in subject and person files.

In State B each new request was placed in a manila folder -- these were all pre-numbered chronologically -- and a complete case record was started. Every record pertaining to the case and the servicing of it, including a list of all bibliographies and materials delivered, went into the folder. When the request was answered and work on it finished, the folder was moved from the "Open" file drawer to the "Closed" file drawer. In addition, the office kept a rotary subject file: all the informational resources and materials in the office were numbered; entries under any particular subject in the rotary file included this number which, in essence, told exactly where in the office the material was located. The office also had a box of index cards, filed by subject, of all the searches done previously.

State C initially decided to use the request order form issued by the regional center. Some difficulties resulted when these were all pre-numbered and different batches given to different field agents. The field agents did not necessarily use their forms in the numbered order and forms were being returned simultaneously by all agents, each of whom had numbers in a different range. Thus, there was no numerical order to the identification numbers received by the reference center. In addition, no number at all was assigned to a request that was not to be forwarded to the regional center for a computerized search. They later devised their own information request form and these were chronologically numbered at the state center as received.

---

[1] According to our survey, exactly 19 percent of the clients in each state had made follow-up requests on the topic.

This retrieval director felt it was of utmost importance to have a single form, on one sheet of paper, which would serve her record-keeping needs, ordering from the regional center and the data needs of the evaluation team. With herself as the sole retrieval specialist and only part-time secretarial help, her concern not to be inundated with mere paper work was most understandable. She went to considerable effort to devise a form which would fulfill these diverse needs and was satisfactory to the others concerned. The regional center, however, required a separate sheet -- or order form -- for each item ordered, regardless of whether several items might pertain to the same request. Because of this requirement, a particular request might have several sheets, or forms, and thus several identification numbers in her files.

To give an example: one school district served by a field agent was interested in setting up a middle school. The field agent found three packets on the various listings from the regional center which he thought might contain useful information. In addition, he requested an individualized computer search, stating in this request various details about the district (its size, socio-economic characteristics, etc.) and about the problems which led to their interest. Also, he wanted copies of the material both for the superintendent and for the principal who would be involved, especially since much of the information was already in packaged form and duplicate packages could supposedly be easily supplied. So far, this amounted to eight separate forms for a single request. Field agents supplied records -- on the same type of request sheet -- at the end of each month on actions they had taken locally, without the assistance of the state center, to supply information to requesters. If this field agent, for instance, put the district superintendent in touch with a faculty member at a state university who had particular expertise on school organization issues, that action would have been recorded on another request form which might have been forwarded to the state information center a couple of weeks later. That form would have been given the chronological identification number current when it was received. If the retrieval director, noting the topic of interest, felt that SEA personnel might be interested in the plans of the district or be useful to the superintendent, and asked one of the state department consultants to get in touch with the field agent or the administrator, she might have filled out still another request sheet when this action occurred, or might have noted it on any of the previous sheets which pertained to the request. Thus, any later attempt to list all of the materials sent and actions taken to answer this particular request -- say, a year later when some other district sends an information request on the same topic -- would involve looking through multiple request forms and be unnecessarily complicated.

Also, the field agents ordered multiple packets for many requesters. This meant multiple request sheets for the same requester on the same day. In the early months after the packet services were offered, field agents simply listed the number and title of the packet ordered on the request form, with no statement of the request itself. Later, in response to a suggestion of the regional center, they were asked to state the topic on which information was requested or the reason for the request on the form so that the regional center could substitute a different packet than the one chosen by the agent if they felt it was more appropriate. Even so, if only a vaguely worded request or purpose for the information was on the form, it was difficult to discern, simply from records, whether several request forms represented an attempt to answer a particular need for information with a variety of resources (or several packets on related topics) or was simply a mass ordering of packets which an individual felt might have materials he would like to read for his general information (or which a field agent thought might contain information which the individual should have on hand, since it was easily available).

To further complicate matters, with little office staff in the retrieval center, dates that particular actions were taken and any other data were rather haphazardly filled out on the forms. So reconstructing the complete record of a case was difficult -- at least, for anyone other than the retrieval director who frequently had a complete and cohesive recollection of all actions taken in a case.[1] One final caveat: these record-keeping inadequacies should not be assumed to imply haphazard servicing of requests. Indications are that paper work was given lower priority because it was deemed of less significance than the actual work of supplying information to requesters. Since such choices were inevitable, given the single person staff and the number of clients served, the policy adopted can only be commended. Service that was comprehensive, individualized and personalized was supplied to an amazing number of clients given the size of the retrieval staff, the inadequate office space for the greater part of the project and the resources available.

---

[1] These record-keeping practices had severe consequences for the evaluation team in attempts to do this very thing -- reconstruct complete cases from the records and code and tabulate this data for quantified analysis. Such data is simply not available and such analysis therefore not possible on many points for State C, as is frequently noted in Chapters 7 and 8. (These practices also had consequences for compilations of statistics, particularly of number of requests received, which were kept by the Office of Education for the state projects. The numbers from the different states are not at all comparable since, totally aside from the mass ordering of packets, a single request from State C might be counted as eight or more cases, as illustrated above, whereas from another state it would represent only one case.)

Before their project began, State A gave considerable thought to the forms they would use for their records and the different files they would keep. Like State B they kept a case record file (chronologically numbered) that detailed the processing and servicing of each request. But there was one page, the bibliography sheet listing all sources cited to the client and materials delivered, that was put into a subject file, along with a copy of the computer print-out. In the spring, 1971, they began to recognize that some requests were almost exactly the same as previous ones. At one time the newsletter of the school district served by one field agent listed all topics on which she had provided information to date. The state office was thereupon flooded with 60 requests for duplicates of one or more of the previous searches. Pulling out the materials from the various parts of the subject file -- putting the cases back together, so to speak -- was enormously time consuming, and the staff decided there would be greater benefits from keeping a complete file of each previous case. They instituted this new procedure and, gradually, as staff members found time, re-assembled the files for cases handled earlier during the year. Staff members cited the change with great enthusiasm, and long before the change-over job was completed, were already finding "a tremendous time saving" under the new method.

State A also kept a copy of the actual coding instructions for the computer search in its case record. Their previous subject file was maintained to house resources other than case records -- that is, all the materials on various subjects that came into the office and might be useful on a request. They also developed another file in which an index card is made for every descriptor in the ERIC Thesaurus implied by a request. These cards, with the exact wording of the request and its case number, were filed according to descriptors.

These observations suffice to indicate the direct consequences of office systems on the efficiency of an information and retrieval service. An additional reward of effective and serviceable record-keeping systems may be in demonstrating its worth to local and national supporters. Most such centers, if set up as a new service of the state department of education or on an experimental basis, must at some point or another justify their existence, or, if supported by federal funds, persuade the state to foot the bill when that source of support is discontinued. Number alone may be insignificant, but an effective record-keeping system should provide materials that can greatly facilitate the job of summing up results claimed by the service.

In this connection, it should be noted that virtually all of the data reported in the next chapter, "Operating an Information Retrieval Center -- The Process and Its Determinants," were derived from the request forms of the three states. If these data were to be combined with the responses of clients to a questionnaire, as we have done in analyzing the outcomes of retrieval processes in Chapter 13, and analyzed along the lines followed in our report, then any dissemination project can monitor its own operations and report results without the aid of additional research or independent evaluations. (See Appendix B for the complete set of instruments used in our study, including a model request form.)

As the history of the pilot states implies, future staffs attempting to establish a new information retrieval system would do well to visit an existing office and analyze in great detail their system of record-keeping and filing. In this area, there is now a supply of expertise and experience which should be drawn upon in advance. There can be little advantage in developing one's own systems through trial and error. Indeed, harsher terms might rightly be used: for future states there should be no excuse for the time and effort wasted by necessary redoing and remaking of systems once a project is underway. Modifications to meet idiosyncratic needs of a particular state can be added without upsetting basically satisfactory systems. Primary requirements are sufficiently generalizable so that the systems can be organized in advance. And they should be established from the outset, even though they might seem overly elaborate to the neophyte.

Staffing

Summarizing the ideal background and qualifications to be sought in a retrieval staff member is impossible for reasons which should be now be obvious: the diverse tasks that confronted the retrieval system and reference centers implied requirements of an equally diverse range of background skills and experience. A partial list of the capabilities that a retrieval staff needed at the outset, or had to attain in short order, included the following:

1) familiarity with computerized retrieval of information;

2) library and research skills, or experience as a research librarian, most usefully in an education library;

3) familiarity with educational hardware and technology, and preferably experience in judging and procuring such equipment;

4) expertise in office systems and management, record keeping and filing.

This excludes an issue not dealt with in this paper but which some would consider the prime characteristic needed by retrieval staff members: considerable knowledge of educational research (knowledge of its substance, not just how to obtain it); familiarity with the current status and directions of research and with the institutions where the most innovative new practices are emerging; and finally, and most important, the perspectives, standards and experience for evaluating the worth of research data, new proposals and experiments. In addition, an acquaintance with the state's schools, their characteristics and personnel, might well prove an asset which would be invaluable.

Rarely are these qualifications found in one person. A project may start with a minimal retrieval office and staff, as did one of the pilot states. But, as the volume of requests increases and as the scope of the office enlarges to take on all these diverse functions of an information service, a multi-person and multi-skilled staff is almost certainly a necessity.

A couple of other points can be made. Although computerized retrieval of information and research was basic to the project, the directors in the three pilot states apparently did not make computer experience or expertise a requirement for retrieval staffs. In all three states, only one person employed for the retrieval operations had any prior experience with computers. There may well have been valid reasons for the director's decisions not to look for such competence, but even though the retrieval staff may obtain the actual computer expertise elsewhere, they need some knowledge, at least on the theoretic level, of the possibilities and limitations of computerized retrieval of information. It was not necessary for the centers to have a computer programmer, but some staff members had to learn at least the coding techniques or the writing of the logic for the specific program used for the computer searches.[1]

Another point to emerge from the pilot project was that some of these skills and experiences can be found more readily in fields other than education. The fact that retrieval-information offices were set up in the state departments of education should not have meant that directors looked for staff members only in educational circles. Such diversity was more feasible, of course, when the staff of the retrieval center was larger.

Benefits from the division of labor according to different talents and propensities of individual staff members were cited by two states.

---

[1] In response to an earlier version of this chapter, retrieval personnel in the pilot states disagreed somewhat with the evaluation team's emphasis on the necessity of having staff members with experience or familiarity with the computerized retrieval of information. One retrieval director wrote: "Qualifications and background in the hiring of retrieval personnel must include teaching experience and need not be strong in computer understanding. It is much easier to understand clients and their requests if you know what goes on in the school building and behind the classroom doors. If you know too much about computers, reality escapes you." Another emphasized a point which the text above makes -- that "you don't need a programming type but a person with an understanding of computer operations."

(The other pilot state had only one person with part-time secretarial help on its retrieval staff.) In State B, one initial staff member who had majored in English education enjoyed doing research and individualized manual searches, while another, whose background was as a school administrator, concentrated more on managerial aspects of the service. State A, which had four subordinate professionals under the center director on its staff, reported a fortuitous meshing of talents. One English major especially liked writing jobs, while another staff member preferred doing only the research, gathering all the relevant data on a subject. As a writer-researcher team, these two collaborated on one of the special aims of that state: not only gathering all available information on a currently important educational topic in the state but also correlating it, synthesizing it, and writing it up in a single paper. A third member of the office, with a social science major in college, took special responsibilities in overseeing and maintaining the office's record-keeping systems. The fourth, formerly a teacher who specialized in reading, was the only one of the staff who had been with the project since its inception and who helped write the original proposal. She was also one of the original pair who learned QUERY, and knew more about the field of education and educational developments than others on the retrieval staff.

As specific personnel on the retrieval staffs changed, even during the pilot period, these particular assignments and meshings of talent altered in various ways. But the basic points remained clear: operating a retrieval and information center required a variety of skills even in its infancy and, especially as the demand for its services increased, a number of staff members. Diversification of background and interests among the personnel of the pilot projects proved to be highly beneficial.

Other Activities

The four issues discussed so far -- the capability of computerized retrieval, furnishing complete copy, setting up office systems and staffing the office -- were essential to the establishment and beginning operation of an information retrieval service in the three pilot states. As the projects routinized these basic operational necessities, some energies were turned to other activities. These will be discussed briefly.

Use of Consultants. One of the aims of the Office of Education in this pilot experiment was not only providing informational materials for requesters, but establishing a linkage system so that school personnel were more frequently put in touch with consultants and experts. The aim was that this personal help would come both from inside the SEA and from experts at other institutions, such as colleges and universities in the state, educational laboratories and other agencies. Compiling a list of such non-SEA consultants who were willing to fulfill this role was another activity of the retrieval centers.

Because extablishing contacts with universities and regional labs entails inter-organizational relations, our discussion of the states' efforts in this direction will be deferred until Chapter 10, "Inter-Organizational Relations."

Selective Dissemination of Information. Another possible activity of retrieval centers is "selective dissemination" of information -- that is, the identification of areas of interest of clients so thay may automatically be kept up to date with new research on information. State B started an experiment with such unsolicited delivery of materials during the project's second year. About two-thirds of the 30 clients included in the system at the outset were named by the field agents,including some who had never used the information service, while others were selected from the state department of education. One member of the retrieval staff compiled a profile sheet on each of the individuals, listing educational topics which would presumably be of interest to them. Using these profile sheets, the retrieval office sent at least one package to each of the 30 clients from new additions to the ERIC and CIJE data base before the end of the year, and reactions to these initial packages were very positive. The decision was made to keep the selective dissemination program on a manual basis at least initially. Thus, the material the requester received was a computer printout of new additions to ERIC, CIJE, etc., but the ordering was done on an individual basis by the retrieval office (using a key sort file) rather than putting the profiles themselves into the computer and having the machine automatically screen new additions to its data base for these selected clients. Although the retrieval staff was pleased with the reactions and enthusiastic about the potential of such a program, given their current case load and office staff, they could envision giving such specialized service to only 30 to 50 individuals.

State C had not yet established an ongoing selective dissemination experiment but, during the second year, attempted something akin to its principle. The retrieval director sent a form letter to all school personnel in the state who had already indicated to the SEA that they intended to write proposals for state or federal funding of experimental projects. The form letter asked whether these planners would be interested in receiving information on the subject of their intended experiment, and a high percentage responded affirmatively. The retrieval specialist, using their initial statement about the proposal, put together appropriate packets. She received a considerable number of follow-up requests for more information or complete microfiche copy, and in general found the enthusiastic reaction of these clients quite gratifying: "You knew they were using the information." She intended to follow up the next year to find out which proposals actually received funding and to ask if more information was needed.

"Exemplary programs"or "promising practices." All three pilot states have made considerable use of Pacesetters and Alert -- efforts to identify experimental programs or projects which have been tried in schools anywhere in the nation. State B found a new resource of this type which they considered outstanding. Developed in Colorado by the Council for Educational Development and Research (CEDAR), this new document was called Catalog of Selected Educational Developments and Research, and included programs, projects and products. State B found this catalogue superior to other resources of the same type because it was updated through January, 1972, contained a full description and evaluation of each product or item listed.

In addition to the nation-wide listings of this sort, each of the pilot states attempted to develop similar in-state resources, identifying experimental projects or programs considered exemplary which were being carried out in the schools of their own state. The retrieval office in State A worked on developing such a file throughout the second year of the project, and toward the end of the year submitted a proposal to the state deputy superintendent to coordinate their file with similar efforts within the SEA. State C had collected information throughout the project on various innovative programs underway in their state. In the summer, 1972, this information was collected from various files so that a single listing could be made. But first, they checked on whether the project was still underway, whether it had been evaluated and whether it would still welcome visitors or observers. In State B, the state department of education had already compiled several documents listing exemplary projects and experimental programs in the state which they made available to the retrieval office. Also, in 1971, their county superintendents started a large "Inquiry" program to identify programs on the junior high and high school level in all different subject matter areas which were being tried in schools over the state.

Screening of Computer Output. As the projects moved into their second year, retrieval personnel were devoting considerable attention to the screening of computer printouts sent to clients. The carefulness of the screening necessary or advisable depended to a great extent on the quality of results from the computer search. As mentioned above, coding techniques had tremendous influence on the degree of relevance of output. Some basic screening is essential to make up for the inadequacies of computerized retrieval, even when it is operating optimally. In particular, it is important to identify and mark abstracts which seem clearly not pertinent in order to prevent irritation of users and to lighten the burden of confronting material which is, for many, heavy reading in a rather unfamiliar format. But even basic screening may be very time-consuming, and scanning techniques must be learned so that it can be done very fast. In general, the aim of basic screening is simply to insure that the abstracts listed are at least pertinent to the topic of the request.

Retrieval personnel moved very quickly to a kind of screening which had the same ultimate purpose but a slightly different emphasis -- checking the abstracts to see if they would be useful to the particular client. This implied a more rigorous kind of screening than simply checking for relevance to the topic of the request. This approach was noted at a retrieval session during a training workshop when all participants were practicing the screening of abstracts. Virtually all of the questions asked by project personnel in attempting to clarify a simulated retrieval case concerned characteristics of the requester: How large was the requester's school? What kind of students did it have -- what were their socio-economic characteristics and what was their general level of achievement? How experienced was the requester and what were his exact position and duties in the school? Did the request originate because he was a member of a committee studying the issue which was its topic? If so, was the study aimed at the possibility of a school-wide experiment -- or was this a request from a single teacher for use only in his own classroom? What kind of programs had the school previously used -- for a request on the teaching of mathematics, what programs was the teacher currently using or how was math generally taught at the school? What kind of reputation did the school system have for its curriculum, its attitude toward experimentation, etc.? What were the principal and other teachers like -- open, flexible, innovative? Or would this be the first attempt to change in a fairly traditional setting?

The prospect of tailoring output to a requester's need requires knowledge of such details. Provided by the computer with a thorough overview of the research on a subject area, the retrieval specialists were making judgements -- as a good research librarian might -- of what this particular requester needed or could use.

Certain points, however, need to be seriously considered by a retrieval center which attempts to offer such individualized service:

1) The retrieval staff frequently does not have the information required for such treatment of clients. Qualitative information from State B indicated that they attempted such tailoring and frequently felt frustrated by the lack of descriptive detail at their command. Our observer reported that the retrieval director mentioned that he did not receive enough information on the request forms to indicate whether specific or general materials were needed, for example. He wanted to know if the request was the first cut at a problem or was undertaken after the client had already done some background reading. "I have to make more judgements every day," he said. "I don't think you ever get enough information." As that state began more consciously to screen materials in terms of appropriateness to the client's level of sophistication as well as of relevance to the topic, the retrieval director attempted to devise a coding scheme for field agents in filling our request forms so that he would have more information about the client. The request forms used so far have not required such details. If an information service is to provide extensive "tailoring", retrieval personnel and field agents must work together over a period of time to codify the descriptive data required about the client and to establish techniques for the field agent to supply them.[1]

2) Screening with the aim of individualization of service can be exceedingly time consuming. As retrieval softward develops, it may be possible for this kind of tailoring to be supplied by the computer. The field agent would supply certain descriptive characteristics about the requester and his context through checklists on the request form, e.g.,

---

[1] Inadequacies in fitting the service to the client's need are amply documented in Chapter 13.

requester's age, degrees, years of experience, size of school (level is generally specified now in the request), setting of school (rural, suburban, city, etc.), general sophistication of client as far as research and innovation are concerned, and administrators and other faculty in his school system. (For a list of dimensions, see our discussion in Chapter 4; see also Appendix G , "Developing a Strategy Based on Particular Clients and Their Setting.") These checklists would simply be coded along with the topic, and there would be provisions in the computer program and the organization of its data base to translate them into further limitations or specifications for the search. At this point in the development of the technology, it is retrieval specialists and not the computers who make such judgements.

If the retrieval specialist has such information on the request form, he himself can translate it into topic terms when ordering the search. Although not easily measurable, the extent to which this practice was followed in the coding of requests was probably considerable. The retrieval specialists knew their state and its school system, and became especially familiar with target areas. As far as retrieval staff time is concerned, this is probably a more economical procedure than screening after the search. However, it raises the possibility of a disadvantageous side effect, which brings us to another issue.

3) There are obvious dangers in pre-judging what will be useful to a client. An abstract pertaining to a study conducted in a totally different context may unexpectedly provide an answer for a client. If tailoring is done either in the coding or eventually by the computer, neither the retrieval specialist nor the requester may ever see the abstract; but

if it is done through screening, then this danger can be minimized. In the latter case, the printout may be marked in various ways to guide the requester or to note which abstracts seem most pertinent and useful. Then the requester can be sent almost all abstracts and determine for himself the extent to which he wants to peruse the entire printout or to accept the judgements of the retrieval office (or possibly, the field agent). Although this procedure avoids the danger of pre-judgement, such service for all requests would take considerable staff time.

It is possible that only a field agent can ultimately provide the guidelines required by retrieval specialists. For example, an agent might indicate that a client is already knowledgeable and wants to know about research on a very specific topic; and that while the search should be very specific so far as topic is concerned, no screening is necessary -- send him back everything and let him decide what interests him. On another request form, let's say a request from a teacher with a very specific classroom problem, the agent might suggest limiting the search or giving her the benefit of extra screening. The aim would be to find just the materials which would be an answer for her and which she would find useful so that she will not be confronted with all materials that might conceivably be relevant.

Recommendations for Future Projects

A summary statement of some of the recommendations suggested by the experiences of the first three pilot states might be useful for future states attempting to establish information dissemination projects.

1) A state should assume that it will ultimately wish to provide its

own computerized search capacity. Reliance on a regional installation means that the information service will have little chance of influencing such matters as turnaround time, relevance, or adequacy of computerized search. Thus, arranging for service from a pre-existing computerized retrieval center should be considered an advisable expediency in the beginning. In general, the demand for services from a new information service is likely to increase faster than one can develop an economical computerized retrieval capability on a local basis.

2) A state should anticipate difficulty, frustration and delay, probably more than the contractors would predict, in making the QUERY program for computerized searches operational and efficient in their own installations. This has happened so generally that an information service that makes a decision to install QUERY might well plan to send their computer and retrieval personnel to an installation with a similar computer capacity and set-up in order to study the problems which these projects have already experienced and solved.

3) The Office of Education or the QUERY contractor should aim at nursemaiding new installations which are attempting to achieve computerized search capabilities. Their responsibility should extend to the point where the program is operational -- and, to some extent, efficiently and economically operational -- not just to the point of purchase and installation. Perhaps detailed, step-by-step case studies of the experiences of those who have installed QUERY could be compiled and furnished to newcomers to the process. Or perhaps the Office of Education or the QUERY contractor should provide task force teams, or more consultants, or more extensive and

specific guidelines or analysis of the individual problems facing a new installation. Whatever the method, our impression is that the pilot states have not had enough expert assistance on this score. New state projects should be able to purchase that expertise and service when they purchase the program.

4) The rationale behind packaged information services should be well understood. To the extent that they are used, it should be with full awareness of possible differences -- in approach to users and in their likelihood of effecting change -- between information supplied on this basis and the aim of individualized service. One must not assume that the appeal of packaged information to clients lies simply in its content. For packages relieve school personnel from the difficult task of defining exactly what their own need or problem is, and thus, eventually from the burden of evaluating the applicability of specific information to their own situation. This is especially true of packages intended simply to raise awareness of certain educational developments. These packages require follow-up to see if more detailed information or consultation is desired. If packages are disseminated broadside, individual follow-up will become virtually impossible. (These observations are confirmed in Chapter 13.)

5) Retrieval services from the outset should adopt a stance of continual reassessment of their *modus operandi*. A constant balancing of cost factors against the quality of output and service, and of what is feasible with available staff and existing technology-- these are the basic issues behind questions of whether requests can be answered by manual or by computerized search, and which requests should be serviced by packages and which by individual searches.

6) The computerized search for abstracts of existing educational research is only the first step toward the real aim of the information service, which is to provide complete copy of research documents, articles or reports (or sections thereof) which would be useful to a client. Procedures for completing the process should be determined in advance. In what form should complete copy by provided -- microfiche or hard copy? How and where can either microfiche or hard copy be obtained? If microfiche is the only feasible format, what techniques can be adopted to overcome any obstacles which this format presents for users? How much will complete copy cost and who will pay for it? What hardware is available and what will be necessary to make the whole process function? How can the necessary resources and hardware be obtained?

7) Personnel establishing an information service would do well to visit an existing retrieval service and analyze in detail their record-keeping and filing systems. Basic systems should be outlined in advance and maintained from the outset. Considerable expertise and guidelines on this score have evolved through the trial-and-error experiences of existing retrieval services. (Our analysis of retrieval forms in the following chapter will give the reader a good idea of what can be learned from available records.)

8) The entire range of qualifications and capabilities required by an information service staff should be envisioned in advance, and the staff should consist of at least two professionals. Thus, a project director might consider which characteristics are essential at the outset, how certain necessary capabilities (perhaps, for example, computer expertise or familiarity with the potentials and problems of computerized retrieval)

CHAPTER 7

OPERATING AN INFORMATION RETRIEVAL CENTER--
THE PROCESS AND ITS DETERMINANTS

Having examined a number of problems in the establishment of an information retrieval service, and the solutions that were worked out by project personnel, we now report statistical data on the operations of the three retrieval centers. These data are based on information contained in a total of 959 information request forms that were processed by the three retrieval offices over a period of about five months. This period occurred about a year after the projects had commenced, and coincided with our survey of individuals who had used the service in the recent past. (In fact, the request forms served as the basis for our selection of users who were sent questionnaires.) If more than one request came from the same individual during this period, the earliest request was selected for analysis and for receipt of a questionnaire. Thus, each request represents a discrete client.[1]

Three important characteristics of the retrieval process were defined for purposes of our analysis:

---

[1] This sampling procedure does not mean that in every case it was a client's first request for the service, for many had made requests prior to the period of our analysis.

The request forms themselves were developed in collaboration with the evaluation and training teams. See Appendix F for a "model" request form.

1) Type of search. We coded from the forms any notations which indicated whether the request had been serviced by an individualized computer search, a manual search, "packets" (i.e., pre-packaged collections of information on certain topics) or any combination of these three types of search.

2) Turnaround time. Here we recorded the date the request was initially made by the requester and the date that materials were sent back by the reference center. We then calculated the overall turnaround time required for servicing the request. We also attempted to sub-divide this overall turnaround time into its component phases: a) the time from the date a request is made to the time it is received, or logged in, at the reference center; b) the time from the date it is received at the reference center to the date it is sent for a computerized search (or sent to some other referral source, or the date the actual search is started); c) the time from the date a request is sent to a referral source to the date it is returned to the reference center; and d) the time from the date material returns from the search to the date material is sent to the requester.[1]

In addition to recording turnaround time as indicated on the retrieval forms of each state, we also asked the clients in our survey how long it had taken for them to receive materials pertaining to their request. Thus, we are provided with measures of objective and subjective turnaround time. Most of the information presented in this chapter, however, refers to objective turnaround time as shown in the retrieval forms.

---

[1] These dates were recorded on the request forms at the request of the evaluation team.

In recording and tabulating this information, we were interested in discovering variation between the three states and also in investigating the factors that determined how service was provided. Three sets of elements might logically affect the kind of service given. The first would be the nature of the request itself, which has three aspects: the purpose for which the user was requesting the information, the topic on which information was desired, and the specificity of the request. Secondly, search techniques might also be influenced by certain characteristics of the requester or of his institutional setting, such as the position held by the requester, the grade level of his students, the type of setting (school, intermediate agency, SEA) and possibly the size of the school or district. (Here we do not relate topic as such to retrieval processes because major topical areas are mainly a function of position.)

The third set of elements which might influence the kind of service is the referral process: whether the request for information came via one of the field agents in the initial target districts or through one of the other representatives that have subsequently been designated by the retrieval centers in two of the states, or whether it came directly.

Type of Search

Various kinds of searches are used to answer requests in each state, and the pattern of variation does differ somewhat for the three states, as can be seen in Table 7.1. (It should be borne in mind that

State A utilized its own computerized retrieval capacity, while the other two states utilized a regional service offering three sets of pre-packaged information.)

TABLE 7.1

THE TYPE OF SEARCH

	State A	State B	State C	Total
Manual search only	16%	13%	9%	13%
Computer search only	23	27	34	28
Packet only	-- (1)	36	43	29
Computer and manual search	52	13	5	20
Packet plus other searches (either manual or computer or both)	9	11	9	10
	100%	100%	100%	100%
Sub-total N	(218)	(428)	(247)	(893)
No data (Information not on form)	(61)	(1)	(4)	(66)
Total N	(279)	(429)	(251)	(959)

As these figures indicate, the modal method of answering requests in State A (52 percent) is a combination of computerized retrieval of information plus a manual search (generally of references in the Education Index). The highest proportion of cases in States B and C were answered with packets (36 percent and 43 percent, respectively), although the percentage answered with individualized computer searches was only slightly lower. (It should be noted that the packets available in those states have been prepared through computerized searches of the ERIC resources on a prior listing of topics by the regional retrieval center, and one set of packets also includes complete copy of relevant articles found through a manual search of CIJE.)

Perhaps a more useful way of presenting the figures in the table above is by indicating the total percentage of all the requests which were serviced by a computer search, a manual search or a packet, as shown in Table 7.2. The totals in the tabulation below equal more than 100 percent since many requests were serviced by more than one kind of search.

TABLE 7.2

THE KIND OF SEARCH SUPPLIED

The percent of requests which received:	State A	State B	State C	Total
a manual search	74%	32%	18%	38%
a computer search	83	46	44	54
a packet	10	47	52	39
Sub-total N	(218)	(428)	(247)	(893)
No data	(61)	(1)	(4)	(66)
Total N	(279)	(429)	(251)	(959)

Turning now to those factors related to the type of search, it seems that the purpose for which the information was requested and the degree of specificity with which the request was stated have some effect. These two distinct aspects of a client's informational need--the purpose of the request and the topic of the information requested--were contained in the majority of request forms.

So far as purpose of the request is concerned, the primary effect seems to depend on whether a clear and definite purpose is stated, whether only a general or vague purpose is mentioned, or whether no purpose is specified at all on the form. We coded the information supplied about purpose, however, in more detailed form, using the following categories:

1) to write a proposal for a grant (from the federal government or some other funding source);

2) to write a position paper to be used as a basis for formulation of policy on a particular issue;

3) to prepare a speech or other presentation for a meeting;

4) to write a term paper or be used for a college or graduate course in which the requester is enrolled.

5) to aid in studying a specific program or reform which is being considered (with no mention of a plan to apply for a grant), or for a committee which has been formed to study a particular problem or topic;

6) for such general purposes as "classroom use," "instructional materials," "instructional methods;"

7) no purpose mentioned.

What our tabulations in no way reflect is knowledge about purpose of the request or probable use of the materials which the retrieval staff may have had on the basis of their personal familiarity with the requester or with his agency--knowledge which was not recorded in any way on the form but may have been influential in determining search strategies. Further, one should not assume that if there is no information on the form, the user in fact does not have any concrete purpose or use in mind for the material (especially since on State B's form there is no particular space where the user or agent is supposed to record the "purpose" or "main use" of the information). But one can assume that the presence or absence of such information will influence the retrieval process. But first, let us compare the three states with respect to the purpose for which the information was intended as revealed by the retrieval forms (see Table 7.3). (Some of the coded responses have been grouped together in Table 7.3 because there were so few requests in certain categories.)

It would appear that State A exceeded the other two states in the frequency with which a clear, definite purpose was specified on the request form. This difference, however, is partly due to the greater frequency of requests for information to serve the purposes of speech writing and position papers or proposals. Since State A received a larger proportion of requests from district level staff, this statistic is not surprising. Moreover, it should be observed that State A also exceeded the other two states in the frequency of vague, general

TABLE 7.3

THE PURPOSE OF THE REQUEST

	State A	State B	State C	Total
Any clear, definite purpose	43%	32%	16%	31%
Personal use: speech or term paper	8	2	3	8
Position paper; to write a proposal for a grant	12	3	3	6
Specific program or reform; committee problem	23	27	10	21
Vague, general purpose	45	41	33	40
No purpose specified	12	27	51	29
	100%	100%	100%	100%
Total N	(279)	(429)	(251)	(959)

purpose requests. Perhaps the only clear fact that emerges from Table 7.3 is the large proportion of requests in State C which omitted any purpose whatsoever from the request form. Later we will see whether a statement of purpose is related to the clients' satisfaction with the service; but first, let us examine an important, intermediate step--the type of search that was conducted according to the clarity of the client's intended use of the information (see Table 7.4).

Table 7.4 would seem to indicate that the less information there is about purpose, the less likely a request is to receive a computer search only; and that in the two states that provided packets, the more likely it is to be answered with a packet only.[1]

---

[1] The latter was found to be true even when packets were not specifically requested by clients.

TABLE 7.4

TYPE OF SEARCH, ACCORDING TO WHETHER REQUEST HAD DEFINITE PURPOSE

	Purpose of Request			
Type of Search	Definite Purpose	Vague Purpose	No Purpose Specified	Total
State A				
Manual only	14%	17%	18%	16%
Computer only	26	23	11	23
Packet only	1	--	--	-- (1)
Manual and computer	53	46	64	52
Packet plus either manual or computer	2	7	4	4
All three	4	7	4	5
	100%	100%	100%	100%
N	(106)	(84)	(28)	(218)
Not specified on form	(13)	(43)	(5)	(61)
State B				
Manual only	14%	16%	9%	12%
Computer only	35	35	6	35
Packet only	14	26	76	36
Manual and computer	20	14	3	13
Packet plus either manual or computer	14	9	6	10
All three	3	1	--	1
	100%	100%	100%	100%
N	(134)	(176)	(118)	(428)
Not specified on form	(1)			(1)
State C				
Manual only	8%	5%	12%	9%
Computer only	54	47	20	34
Packet only	10	29	62	43
Manual and computer	13	6	2	5
Packet plus either manual or computer	15	13	4	9
All three	--	--	--	--
	100%	100%	100%	100%
N	(39)	(83)	(125)	(247)
Not specified on form	(1)	(1)	(2)	(4)

Before continuing our analysis of the determinants of retrieval processes, it is useful to have some idea of the topics of requests which the retrieval personnel were responsible for handling. We had hoped to feed-back comparative information to the three states concerning the occurrence of certain topics, but found that the categories being used by each of the three retrieval centers were non-comparable and inadequate for analytical purposes. We therefore set about developing a taxonomy of educational topics which we later submitted to the states in the hopes of adoption. By that time, however, they had become accustomed to their own set of categories and preferred to continue using them. Nevertheless, the taxonomy was quite helpful in our own later re-coding of the request forms.

The formulation of the taxonomy was a formidable task. We could not locate a ready-made scheme that covered broad areas of educational interest as well as more specific topics lying within these areas. The ERIC categories, for example, are arranged alphabetically rather than in taxonomic form. Several sources were used for building categories: the classification employed by each of the three pilot states; the problems or needs of clients as identified in the numerous cassette tapes received from our field observers; the listing of topics in the ERIC thesaurus; the listing of topics in the ten volume Encyclopedia of Education (N.Y.: Macmillan, 1971); and the categories used for a national survey of research topics in schools of education. The final taxonomy, which covered some 175 topics, is presented in Appendix E . The proportion of requests on major topics in each of the three pilot states, according to field agent, SEA and non-target clientele, are shown in Table 7.5. Because this distribution may signify the major information needs of school practitioners and SEA personnel, at least in states which are not highly urbanized, these figures deserve close attention by information officers, researchers, and field workers.

Overall, the one specific school subject area that stands out as requiring more information than any other is language arts (including literature). Nineteen percent of all requests fell into this category. (See the Total column in Table 7.5.) Further, instructional methods and curriculum excelled all major topical areas in frequency, with 44 percent of all requests in this category. Here we included materials and instructional approaches in general, as well as information about particular programs, such as individualized instruction, behavioral objectives, programmed instruction, team teaching, games, independent study, reinforcement, and so on. (The specific topic that received the largest proportion of requests was individualized instruction with 7 percent of all requests falling into this area. However, this was mainly due to agent C-1 and his aide who apparently generated a very large proportion of requests for packages on the topic from the regional retrieval center. Fully 27 percent of the original field agent's requests were for individualized instruction, while 41 percent of his assistant's requests were on this topic.)

With regard to information about students themselves, it is somewhat surprising that clients so infrequently sought information about

TABLE 7.5

TOPIC OF REQUESTS, ACCORDING TO FIELD AGENT, NON-TARGET LOCATION, AND SEA*

	State A				State B				State C					Total
	F.A. 1	F.A. 2	SEA	NT	F.A. 1	F.A. 2	SEA	NT	F.A. 1**	F.A. 2	3	SEA	NT	
Subject matter fields														
Language arts	42%	18%	4%	2%	19%	13%	9%	25%	17%	8%	25%	--	11%	19%
Foreign languages	--	--	4	--	--	--	--	--	--	--	--	--	--	.1
Math	10	15	--	5	1	1	--	6	6	38	11	7	4	7
Sciences	6	4	4	2	9	7	5	9	1	3	7	--	3	1
Social studies	1	8	--	5	5	1	5	7	1	11	5	--	--	1
Art, music, drama	7	--	8	4	9	2	--	1	3	--	2	--	--	3
Physical ed.	--	--	--	--	4	2	--	1	--	--	2	4	4	1
Health, sex ed.	1	--	--	1	1	--	--	1	--	3	--	--	--	1
Vocational ed.	1	4	14	4	7	10	18	7	13	3	3	--	4	6
Home economics	--	--	--	1	--	--	--	--	--	--	--	--	--	.1
Extra-curr. activ's	1	--	4	--	2	1	--	1	1	3	--	--	--	1
Moral education	--	--	--	--	1	1	--	1	--	--	--	--	--	1
Black subjects	--	2	--	--	--	--	--	1	--	--	--	--	--	1
Instructional methods and curr.	80	41	31	48	58	34	18	39	64	52	57	13	29	44
In-service education	--	4	--	5	--	4	--	2	--	--	--	4	--	2
Instructional resources, retrieval and storage	4	6	17	5	11	4	22	4	--	3	9	4	4	6
Instructional media, tech.	1	5	6	5	10	10	2	4	1	5	2	7	2	5
Students														
Individual characteristics affecting learning	6	1	4	5	--	4	--	9	--	5	1	--	20	5
Mental health	3	4	--	7	--	1	--	2	1	3	2	--	5	2
Special ed. - mental	19	18	4	25	5	4	--	8	1	3	13	4	35	12
Special ed. - physical	13	5	--	5	1	2	--	2	4	3	2	4	7	4
Disadvantaged, minorities	15	15	8	10	--	5	5	7	1	8	--	--	4	7
Discipline, behav. problems	6	8	14	7	2	9	--	4	3	3	--	10	7	5
Student activism	--	--	--	--	--	1	--	1	--	--	--	--	--	1
Evaluation, testing	15	8	--	5	5	9	14	5	1	5	5	7	4	7
Counseling	--	5	8	4	4	7	14	3	--	5	2	13	2	4
Administration														
General	--	--	--	--	--	--	--	1	--	3	--	--	--	1
Personnel	6	9	35	18	8	16	18	21	7	27	--	27	9	15
Structural or organ'l plans	7	12	8	9	4	10	--	4	1	3	14	13	11	7
Management systems	--	--	4	--	1	9	9	2	--	7	2	4	--	2
Open school, infant school	--	--	--	--	--	--	--	1	--	--	2	4	--	1
Standards (class size, accreditation, etc.)	--	4	17	4	4	4	13	4	--	3	--	--	--	3
School operations and financing, plant	1	6	13	6	1	7	5	8	--	3	6	10	5	6
Community relations	4	4	--	1	4	4	--	3	1	11	1	10	2	3
Innovations, design and evaluation	1	2	17	--	--	--	--	2	--	3	--	--	2	1
N	(67)	(81)	(23)	(36)	(89)	(90)	(22)	(157)	(71)	(37)	(44)	(29)	(54)	(924)

*Based on retrieval forms.

**Includes the field agent's assistant.

290

individual characteristics affecting learning, a category which contains the following sub-topics: learning theory, child development, cognitive processes, individual differences in intelligence, sex, age, etc., and creativity. Only 5 percent of the requests were codeable in this broad category, which is less than half the proportion in the category of special education for the mentally handicapped. Since the great bulk of basic educational research falls under this heading, it is obvious that the clients were not explicitly making requests that could be answered directly by fundamental research and theory on individual differences and learning.

The educational field agent might have a translation job to do here. Many of the specific "needs" or "problems" expressed by clients could be rephrased in writing the request forms in terms of basic learning processes, providing the agents were able to take this step. This would require two kinds of additional training: substantive training in theories of learning and individual differences, and training in "diagnosing" the needs of clients in terms of basic processes. (This diagnosis need not be done in the client's presence, but could be accomplished in the privacy of the agent's office or car.) That the agents were not performing this task is indicated by the fact that non-target requesters more often asked for information on individual characteristics affecting learning than did target area clients, and especially in State C. In that State, 20 percent of the non-target requesters wanted information in this area, compared with only about 2 percent of the target area clients. Thus, it is by no means true that practitioners are not interested in information on this topic. We have seen that non-target requesters are generally more sophistocated about educational resources owing to their higher educational attainment and higher school positions. But it would seem that the field agents have not done much in the way of raising their own clients' level of awareness of the processes underlying school learning to a level comparable to that of non-target requesters. This might well be adopted as a distinct objective of future extension agent programs.

The most striking difference between target and non-target requesters, however, turns up in the category of instructional methods and curriculum. In each state, the clients of at least one of the agents far exceeded the proportion of non-target requesters in this domain. And once again, these agents were the former teachers employed in the pilot state program. Conversely, agents who had been administrators generated more requests on school organization and administration (with the exception of agent C-1a). In short, the tendency to move toward individuals whose jobs are more familiar to the agents affects the topic of requests. This tendency was especially striking in the case of agent A-1. This agent had formerly been an English teacher; and fully 42 percent of her requests were for information in the area of language arts. The range of requests regarding language arts among the other agents was only 8 percent to 25 percent, which was about the same range among the three non-target areas. These observations reenforce our conclusion that field agent teams should be formed comprising individuals with different backgrounds.

What were the distinctive interests of SEA personnel? In two states (A and B), SEA personnel were more interested in vocational education than either target or non-target clients. This is no doubt due to the new emphasis on "career education" being currently promoted by the U.S.O.E.[1]

Another topic wherein SEA requests exceed those of target and non-target clients alike (with the exception of non-target requesters in State B) is the topic of personnel. The respective figures for the three SEA's are as follows: State A, 35 percent; State B, 18 percent; and State C, 27 percent. (This emphasis in State A might reflect desegregation efforts entailing the shifting of personnel among schools.) Still another relatively distinctive concern of SEA personnel in States A and B was standards (pupil-teacher ratios, accreditation, etc.). And finally, in States A and C, SEA personnel were more often interested in school operations and financing than either target or non-target school personnel. These are all rather traditional concerns of educational administrators, and only in State A do we discern a tendency for SEA personnel to pay more attention than target or non-target requesters to less conventional approaches, such as innovations, design and evaluation (design, implementation, evaluation and financing of new programs or products). Seventeen percent of the requests from SEA personnel in State A fell into this category, compared with none in the other two states.

It is somewhat curious that SEA personnel were less often concerned with the following topics: individual characteristics affecting learning

---

[1] Budgeting for this area in the National Center for Educational Research, U.S.O.E., currently exceeds that for any other "problem area," except for something called "educational innovation."

(especially States B and C), special education for the mentally handicapped (especially States A and B), subject matter fields in general (with the exception of vocational education), and students in general. In sum, state departments of education would seem to be mainly interested in administrative and financial problems of education; and their interests in this area do not bespeak a very up-to-date approach, with the possible exception of State A. Clearly, the field agents were engendering requests which were closer to the school and classroom situation, and of far greater relevance to the understanding of students, than the requests of SEA personnel.

Now let us proceed with our examination of the determinants of retrieval processes. An important issue is the specificity of the topic contained in the forms. Even a cursory examination of the request forms from the pilot states revealed tremendous variation on this dimension. Further, we gained the impression that there were notable differences between the three states on this score. Since it seemed to us that specificity of the topic would influence both retrieval process and outcome, we decided to make an attempt to code this variable as accurately as possible. We were well aware of the difficulties involved in attaining a high degree of reliability for a specificity scale based on our own judgements, and therefore took considerable pains to insure that some confidence could be placed in the resultant classification. In brief, our measurement of specificity represents the combined judgements of three independent coders.[1]

It turned out that our impressionistic sense of differences between the states with respect to specificity of the query was primarily due to differences in requesting a particular packet, microfiche copy or other document--in other words, those cases where the request form actually represented an order form with no statement of the topic of the request. When these forms were excluded, there was a surprisingly high degree of similarity in the specificity of substantive queries in the three states. This can be seen in Table 7.6. About half of the requests in each state fell into the medium level of specificity, with the remaining requests being equally divided between the high and low levels of specificity. Now let us see if specificity of topic is related to type of search.

---

[1] The three coders were the two co-project directors and the supervisor of coding and computer operations for the evaluation team, individuals who were all thoroughly familiar with the format of the request forms and with the mannerisms and style of filling them out in each state.

TABLE 7.6

SPECIFICITY OF TOPIC

Level of Specificity*	State A	State B	State C
High (1, 2)	23%	23%	30%
Medium (3 - 5)	48	48	48
Low (6, 7)	29	29	22
	100%	100%	100%
Sub-total N	(274)	(313)	(142)
Mean score on specificity scale (1 - 7)	4.17	4.12	3.78
Requests for:			
Specific packets	1% (3)	19% (80)	34% (85)
Specific articles, documents or microfiche	-- (2)	8 (36)	1 (3)
Specificity of request could not be judged	-- (0)	-- (0)	8 (21)
	100%	100%	100%
Total N	(279)	(429)	(251)

*The total range of the specificity scale had seven points with 1 representing highest specificity and 7 representing lowest specificity. This resulted from the additive combination of the judgements of three individuals, each classifying specificity of a request into three categories.

Notable observations from Table 7.7 are that the more specifically worded requests were more likely to receive a manual-only search in two states, and a computer-only in one state. The least specifically worded requests (in the states where packets are available) were more likely to be answered with a packet, either alone or in combination with other searches. State B exemplifies this pattern most clearly. Manual search alone was rendered for 37 percent of the highly specific topics, 12 percent of the moderately specific ones, and 3 percent of the least specific ones. Computer search alone was provided for 38 percent of the highly specific topics, 43 percent of the moderately specific ones, and 25 percent of the least specific. Conversely, none of the highly specific topics, 9 percent of the moderately specific and 42 percent of the least specific ones received only a packet.

These patterns seem a very sensible and rational way of allocating retrieval resources, for they suggest a useful function to be served by packeted information service as contrasted with individualized computer searches. Probably the most efficient way of servicing poorly formulated requests for information is with pre-packaged materials which induce the client to further define or specify his information needs. Future requests, provided they are forthcoming (and here the field agent's follow-up becomes critical), can then receive a more tailored search. Still it should be borne in mind that a quarter to a third of the requests of low specificity in the three states were serviced by computer searches only. Later we will see if these searches actually satisfied the client whose initial request was rather vague.

TABLE 7.7

TYPE OF SEARCH, ACCORDING TO SPECIFICITY OF TOPIC*

Type of Search	Specificity of Topic			
	High	Medium	Low	Total
State A				
Manual only	24%	13%	11%	16%
Computer only	18	24	26	23
Packet only	--	--	--	--
Manual and computer	54	54	48	52
Packet plus either manual or computer	4	1	11	4
All three	--	8	4	15
	100%	100%	100%	100%
N	(54)	(106)	(54)	(214)
State B				
Manual only	37%	12%	3%	15%
Computer only	38	43	25	37
Packet only	--	9	42	16
Manual and computer	18	23	9	18
Packet plus either manual or computer	6	13	19	13
All three	1	--	2	1
	100%	100%	100%	100%
N	(73)	(148)	(91)	(312)
State C				
Manual only	10%	4%	6%	6%
Computer only	61	59	32	53
Packet only	10	15	36	18
Manual and computer	7	12	3	9
Packet plus either manual or computer	12	10	23	14
All three	--	--	--	--
	100%	100%	100%	100%
N	(41)	(68)	(31)	(140)

---

*Orders for specific packets, documents or microfiche which did not mention topic are excluded from this table.

Turnaround Time

Another essential characteristic of the service from a retrieval center is its speediness. As mentioned in Part I, all three project directors emphasized the importance of expeditious processing and delivery of information requests. States in the pilot project differed considerably, however, in their average turnaround time for answering a request.

TABLE 7.8

OVERALL TURNAROUND TIME
(In Days)

	State A	State B	State C
Request forms:			
Median number of days*	26	15	15
Mean number of days	29	16	17
Percent serviced:			
Within 1 week	4%	26%	15%
1 - 2 weeks	13	23	32
2 - 3 weeks	24	25	27
3 - 4 weeks	19	13	12
More than 4 weeks	39	14	14
	100%	100%	100%
N	(272)	(426)	(160)
No data	(7)	(3)	(91)
Questionnaire:			
"About how long did it take for you to receive information or personal assistance after you made your initial request on this topic?			
Median number of days	14	9	12
Mean number of days	17	13	16
N	(156)	(345)	(169)
No answer	(12)	(17)	(121)

---

*The median number of days for servicing requests is probably the fairer general statistic since the mean number of days may represent some undue penalty for those cases which required an exceedingly high number of days.

Dates allowing the computation of the overall turnaround time were noted on almost all of the forms from two states and almost two-thirds of the forms from the third state, as shown in Table 7.8. In general, servicing a request took almost four weeks in State A compared with slightly over two weeks in States B and C. The median in State A was the 26th day following the client's request; and as the table indicates, 39 percent of the requests in that state required more than four weeks for handling. In contrast, almost half of the requests from each of the other states were handled within two weeks, with only 14 percent requiring more than four weeks.

In the questionnaire distributed to the users of the service (selected on the basis of the request forms), we asked the respondents themselves how long it took to receive the information or personal assistance which they had requested. Their responses are also shown in Table 7.8. And curiously enough, there was considerable under-reporting of days in State A. While the request forms indicate a median of 26 days, the clients reported a median of only 14 days. There was some slight under-reporting of days in States B and C also, but nothing of the magnitude of State A where perceived time was almost half as long as actual time. This result suggests that excessive turnaround is not a problem with many clients, since they tend to underestimate the amount of time which ensues between request and delivery of information. On the other hand, the passage of time may be experienced as burdensome, even if the exact number of days is underestimated. (This issue will be studied directly in Part VI, Chapter 13, where we look at client satisfaction according to turnaround time.)

Overall turnaround time is comprised of a series of intermediate actions, and the request forms of each state provided space for recording the date when each major step in the retrieval process was completed. Figuring these intervening time periods allows us to determine which phases of the retrieval process accounted for what portion of the overall turnaround time, as shown in Table 7.9. (Such a breakdown would also give a retrieval staff the basis for analyzing its own operations, and, if necessary, for making changes in its processing routines.) Unfortunately, dates for these intervening steps were consistently noted by only one state (State B).

TABLE 7.9

TIME REQUIRED FOR DIFFERENT STEPS IN TURNAROUND
(In Days)

	State A			State B			State C		
	$\bar{X}$	Md	N	$\bar{X}$	Md	N	$\bar{X}$	Md	N
1. Date of request to date received	4	3	(274)	3	2	(427)	2	0	(164)
2. Date received to search	7[a]	5	(164)	.9	0	(420)	3	0	(90)
3. Search time	7	6	(121)	12[b]	11	(410)	13[b]	12	(68)
4. From search to requester	12	8	(122)	.8	0	(408)	.1	0	(162)
Overall turnaround*	29	26	(272)	16	15	(426)	17	15	(160)

[a] Includes coding time in State A.

[b] Includes coding time in regional retrieval center used by States B and C.

*Adding days for the intervening time periods in the table above does not exactly equal the figure for overall turnaround primarily because data were not available for a high proportion of the intervening figures. The figure "0" means that the median for that time period was the same day.

In State A, dates of the intervening steps were generally recorded only for requests which received computer searches, and not even for all of these, so that data were available in roughly half the cases. Further, completion of different steps in the retrieval process was seldom noted on the forms from State C, so that data on this point were available for only a small portion of the cases. Nonetheless, we have included below a tabulation of these intervening time periods since it presents graphically the steps in the course of handling requests and suggests an explanation for the longer turnaround in State A.

In State A the time required for the information search itself (line 3) represents only about one-fourth of the overall time. The same amount of time elapses between receipt of the request and the beginning of the search. But the largest proportion of time is spent after the search has been completed. In States B and C, almost all of the turnaround time is accounted for by the time required for the search (a median of 11 and 12 days, respectively). This is almost twice as long as it takes in State A because of their referral to an out-of-state regional retrieval facility where coding is also done. Table 7.10 indicates clearly the norm in States B and C: that a request is sent for a search the day it is received (or at least within three days), and that material is sent to the requester almost as soon as the search is finished. On the other hand (using State B as an example) if a search is not completed the same day, it is not likely to be finished until from 8 to 21 days later. In State A, by contrast, more than three-fourths of the searches were completed within 10 days.

TABLE 7.10

PERCENTAGE BREAKDOWN OF TIME REQUIRED FOR DIFFERENT STEPS IN TURNAROUND

Time Periods	State A	State B	State C
1. From date request was made to date received at reference center			
Same day.	15%	21%	70%
1 to 3 days	41	50	12
4 to 7 days	37	24	7
8 to 10 days.	3	3	6
More than 10 days	4	1	5
	100%	100%	100%
N	(274)	(426)	(164)
No data	(5)	(3)	(87)
2. From date request was received until search started*			
Same day.	7%	61%	90%
1 to 3 days	32	31	9
4 to 7 days	27	7	--
8 to 10 days	17	1	--
11 to 14 days	10	--	--
More than 14 days	7	--	1
	100%	100%	100%
N	(162)	(419)	(90)
No data	(117)	(10)	(161)
3. From date search started until completed**			
Same day.	2%	22%	25%
1 to 3 days	30	7	2
4 to 7 days	25	7	3
8 to 10 days.	21	12	13
11 to 14 days	14	16	19
15 to 21 days	4	21	21
22 to 28 days	3	10	10
More than 28 days	1	5	7
	100%	100%	100%
N	(121)	(409)	(68)
No data	([illegible])	(10)	(183)
4. From date search completed until material sent requester			
Same day.	6%	61%	86%
1 to 3 days	17	36	14
4 to 7 days	23	2	--
8 to 14 days.	30	(1)	--
15 to 21 days	11	(1)	--
More than 21 days	13	(2)	--
	100%	99%	100%
N	(122)	(407)	(162)
No data	(157)	(22)	(89)

---

*Includes coding time for computer in State A.

**Includes mailing and coding time in States B and C.

One obvious point, of course, is that the states have very different modes of operation. One of the essential differences is that State A has developed its own computerized retrieval capability, while States B and C have relied on a regional retrieval installation for their computer searches.[1] In State A, requests are coded by the retrieval staff and search instructions are sent to the computer center. In States B and C, the regional center does the coding for the searches it provides. This is no doubt the explanation for the time which elapses between receiving a request and referring it for the actual search in State A. In the other two states, the time required for coding requests is included in the search time. Interestingly, if the means for these two time periods are combined, the sum is almost the same for all states (in whole numbers, a median of 14 days for State A, 13 days for State B and 16 days for State C). The "search time" for States B and C also, of course, includes mailing to and from the regional installation. Thus, although turnaround time on individualized computer searches has been a concern of the regional installation, it apparently has more than bettered the time required for the coding-plus-searching process in the state which uses its own computer.[2]

---

[1] State B has since developed its own computerized retrieval capability. At the time of our survey it was still using the regional service for packets and the greater part of its individualized searches. State C has purchased and installed the retrieval program, but it is not yet operational.

[2] The "quality" of the search, of course, is a different issue, and will be dealt with in terms of client satisfaction and utilization in Part VI, Chapter 13, "Outcomes of the Retrieval Process."

Retrieval staffs in all three states reported that they attempted to scan the print-outs returned after a computer search. This screening was apparently much more time-consuming process in State A, accounting for the lengthier time between the completion of the search and the delivery of material to the requester. Another factor may be the much higher percentage of the cases in State A which are given manual service in addition to the computer search. Also, as mentioned earlier, the regional installation offered three kinds of packets of information, which were not available in State A. Thus, discussion of turnaround time must be coupled with the type of search used to answer a request (Table 7.11).

With reference to Table 7.12, summary points may be most usefully made in terms of the individual states, including some additional figures from tabulations of the intervening time periods according to the type of search.

State A. Data available on the time required for the search itself are restricted to cases which received computer search, although the great majority of these (74 percent) also received some other kind of service (primarily a manual search). Generally, a manual search entails a check of the Education Index and of other miscellaneous materials which the retrieval center has collected and keeps in subject files, resulting in a typed list of articles by title, author and source. Frequently, the date on which the manual search of these office resources was done was not recorded on the form, so the search times tabulated below reflect primarily the time required for the computerized search only.

TABLE 7.11

OVERALL TURNAROUND BY TYPE OF SEARCH

	Type of Search				
	Manual Only	Computer Only	Packet Only	Computer-Manual	Packet Plus Other
State A					
The percentage of cases completed:					
Within 1 week	9% } 21%	2% } 16%	(1)	3% } 13%	-- } 25%
1 to 2 weeks.	12	14	--	10	25%
2 to 3 weeks.	41	20	--	27	35
3 to 4 weeks.	6	25	--	18	10
More than 4 weeks . . .	32	39	--	42	30
	100%	100%	(1)	100%	100%
N	(34)	(49)	(1)	(109)	(20)
Total cases included in table	213				
No data (on turnaround or type of search)	66				
State B					
The percentage of cases completed:					
Within 1 week	46% } 78%	1% } 24%	44% } 70%	11% } 25%	22% } 35%
1 to 2 weeks.	32	23	26	14	13
2 to 3 weeks.	11	33	17	33	33
3 to 4 weeks.	4	19	8	22	16
More than 4 weeks . . .	7	24	5	20	16
	100%	100%	100%	100%	100%
N	(56)	(114)	(155)	(55)	(45)
Total cases included in table	425				
No data (on turnaround or type of search)	4				
State C					
The percentage of cases completed:					
Within 1 week	83% } 94%	4% } 21%	10% } 67%	--	5% } 42%
1 to 2 weeks.	11	17	57	--	37
2 to 3 weeks.	6	34	18	(4)	42
3 to 4 weeks.	--	17	8	(2)	16
More than 4 weeks . . .	--	28	7	(2)	--
	100%	100%	100%	(8)	100%
N	(18)	(53)	(60)	(8)	(19)
No data on turnaround time.	(4)	(32)	(46)	(4)	(3)
Total cases included in table	158				
No data	93				

TABLE 7.12

STATE A: TIME REQUIRED FOR INFORMATION SEARCH, ACCORDING TO TYPE OF SEARCH

	Type of Search*				
Search Time (Excluding Coding)	Computer Only		Computer and Manual		Packet Plus Other
Within 3 days	37%	67%	30%	53%	(2)
From 4 to 7 days	30		23		(1)
From 1 to 2 weeks	30		36		(4)
From 2 to 3 weeks	3		5		---
More than 3 weeks	--		6		---
	100%		100%		
N	(30)		(80)		(7)
No data: (162)					

---

[*] There are no columns for "manual only" searches or for "packet only" service since there was no data on search time for any cases in these categories.

The search time for those cases answered only with computer service was less than two weeks in almost all cases (67 percent of them in one week and 30 percent more in the second week). But one-fifth of these requests were held more than a week before being sent to the computer center, presumably the time required for coding. After material was returned from the search, more than one-fourth of the requests answered only with computer print-outs were held more than two weeks before being returned to the requester. (Material was delivered within three days after the search was completed in 27 percent of the cases, within a week in

27 percent, and within two weeks in 20 percent.)

The pattern was substantially the same for those requests which received the results of a manual search in addition to the computer print-out. Search times were slightly longer (the search was completed within one week in only 53 percent of the cases as contrasted with 67 percent of the computer-only searches). But this difference is not as much as one would expect, substantiating the observation that the time required for the additional manual search is not fully reflected in search times per se but is also a factor in the time required after the search is completed and before material is sent back to the requester. A slightly higher proportion of those cases which ultimately received some service in addition to the computerized search were held in the office more than a week before being sent to the computer center. After the search was completed, the materials were delivered within a week in 42 percent of the cases (as opposed to 54 percent for computer-only), and again almost one-fourth of them (23 percent) were held more than two weeks after completion of the search before delivery to the requester.

These figures suggest that results of all computer searches are held for screening, producing a considerable backlog of computer print-outs, and that decisions about whether to add results of other kinds of searches are made at this point.

Clearly, the greater proportion of the overall turnaround time in State A is due to coding and the practice of holding all cases for individualized screening and possible manual searches. While there may be special benefits from this additional service, a matter to be examined in Chapter 13, it must be weighed against the cost and time required. We have seen in Table 7.12 that there is little difference in overall turnaround time between those requests serviced by computer search only and those receiving manual service in addition to a computer search. When the penalty of delay is levied on those cases for which no extra service is provided, then the practice should be even more critically considered. Perhaps some such procedure as a two-stage delivery of materials could be tried. Abstracts could be delivered immediately after checking them for relevance, while a notation could be made of cases requiring additional servicing. The results of these additional searches could be delivered later on. Perhaps another feature of State A's retrieval service which delays the delivery of materials is the practice of placing all materials, including bibliographies, in an attractive packet with instructions and forms for ordering articles and microfiche. While this procedure produces a very attractive dossier for clients, it might increase turnaround time.

As Table 7.11 showed, the type of search affording most expeditious service in State A (as in the other two states) was manual searches only. But even here, turnaround time was two weeks or less in only 21 percent of State A's cases (compared with 78 percent of the cases serviced by manual searches in State B, and 94 percent of the small number of cases so serviced in State C).

State B. Here the breakdown of turnaround time shows a different pattern. The search was initiated within three days in 92 percent of the cases and when material from the search was delivered to the retrieval center, it was sent back to the requester within three days in 97 percent of the cases. The addition of some kind of manual service to the computer search had no effect on overall turnaround time and made little difference in office handling time: 94 percent of the cases receiving computer-only service were sent to the referral service within three days, and material was returned to the requester within three days after the search was completed in 98 percent of the cases; 93 percent of the cases receiving manual service in addition to a computer search (done in a much lower proportion of cases than in State A) were sent off within three days, and material was sent to the requester within three days after its return to the retrieval center in 94 percent of the cases. In this state, the entire explanation of the overall turnaround is that time required for the information search itself. The cross-tabulation is presented in Table 7.13.

For almost three-fourths of the cases which received manual service only, the search was completed within one week. As mentioned previously, the overall turnaround time was within two weeks in 78 percent of the cases which were answered by a manual search only (see

TABLE 7.13

STATE B: TIME REQUIRED FOR INFORMATION SEARCH, ACCORDING TO TYPE OF SEARCH

	Type of Search*				
Search Time	Manual Only	Computer Only	Computer and Manual	Packet Only	Packet Plus Other
Within 3 days	62% } 73%	1% } 12%	8% } 17%	47% } 51%	30% } 30%
From 4 to 7 days	11	11	9	4	--
From 1 to 2 weeks	17	25	21	33	41
From 2 to 3 weeks	6	33	31	14	18
From 3 to 4 weeks	--	20	25	1	7
More than 4 weeks	4	10	6	1	4
	100%	100%	100%	100%	100%
N	(53)	(115)	(144)	(52)	(44)

No data: (21)

---

*The order of the columns is changed from that used in previous tables involving this variable to allow easier comparisons between computer-only searches and computer-plus-manual service.

Table 7.11). The efficiency of packet service only is also demonstrated by Table 7.13: a search time of a week or less was recorded for half of these requests, and (from Table 7.11) the overall turnaround time was two weeks or less for 70 percent of the requests.

The slowest search time was for computer-only searches: a week or less in only 12 percent of the cases and more than two weeks in 63 percent of the cases. (This is the reverse of the pattern in State A where we find a computer search time of one week or less in 67 percent of the cases, and from one to two weeks in 30 percent more cases. But, as mentioned before, search times in State A do not include the coding operation.)

State C. This state uses the same regional installation as does State B, employing the packet services heavily and being totally reliant on the regional center for individualized computer services. Indications are that the pattern on overall turnaround time and the breakdown on the intervening steps is similar to that in State B, with the primary determinant of overall turnaround being the time required for the information search itself. Almost two-thirds of those cases answered with individualized computer searches (or of those for which data were available) had a search time of more than two weeks, and for a great proportion of these the search took over three weeks. The pattern is not analyzed in more detail for this state because data on the intervening steps was available on only a minority of the forms.

* * *

can be provided for the service by outsiders if not by the initial staff, and the advantages that will result from a diversification of backgrounds and qualifications of staff members.

9) As retrieval techniques of a new information center become more sophisticated and its services more individually tailored, more extensive communication between the field agent and the retrieval specialist is required. Both should be familiar with different kinds of searches and their appropriateness for individual clients. Jointly they should attempt to codify information about the client which is required for differentiation of service.

Looking at trends on turnaround time over the months when our survey was being conducted suggests improvement in each state. Figures in Table 7.14 indicate that a steadily decreasing percentage of requests required more than three weeks for servicing and conversely, although the trend is not so consistent, that an increasing percentage of cases were handled in one or two weeks. State A exhibits a notable difference of 70 percent in the cases requiring more than three weeks turnaround time between the beginning and end of the five-month period. An exceedingly high percentage (92 percent) of requests made before October (mostly in September) were not answered within three weeks, while only 22 percent of those requests dated in January required that long. The tabulation for State B indicates an increase from 25 percent of the earlier requests completed within a two-week turnaround to 51 percent of the January requests; and, correspondingly, a decrease from 46 percent of the earlier requests requiring more than three weeks to 8 percent of the January ones. Figures from State C also seem to indicate an overall improvement in turnaround time.

These figures, for States B and C at least, must be related to the type of searches used to answer the request. Data from State A indicate little change in the type of service given requests over this period of months, with manual service given in only a slightly increasing percentage of cases. Thus, their improvement in turnaround time over these months may imply some speed up in coding and screening procedures.

State B exhibits a decided trend toward more frequent use of computer searches and less frequent use of packet service. Coupled with

TABLE 7.14

TRENDS IN TURNAROUND TIME: OVERALL TURNAROUND TIME BY MONTH IN WHICH REQUEST WAS MADE

	Month Request Was Made				
	Before October	October	November	December	January
State A					
The percentage of cases completed:					
Within 1 week. . . .	--	1%	4%	26%	--
1 to 2 weeks	2%	11	2	26	28%
2 to 3 weeks	6	19	28	21	50
More than 3 weeks. .	92	69	66	27	22
	100%	100%	100%	100%	100%
	(51)	(98)	(47)	(19)	(32)
Total cases in table: 247					
Excluded:					
Request made in February: 25					
No data on turnaround: 7					
State B					
The percentage of cases completed:					
Within 1 week. . . .	14%	26%	26%	31%	28%
1 to 2 weeks	11	20	22	27	33
2 to 3 weeks	29	22	23	22	31
More than 3 weeks. .	46	32	29	20	8
	100%	100%	100%	100%	100%
	(65)	(111)	(93)	(59)	(86)
Total cases in table: 414					
Excluded:					
Request made in February: 12					
No data on turnaround: 3					
State C					
The percentage of cases completed:					
Within 1 week. . . .	(6)	3%	--	6%	11%
1 to 2 weeks	(1)	26	52%	46	29
2 to 3 weeks	(1)	22	24	31	31
More than 3 weeks. .	(4)	49	24	17	29
	(12)	100%	100%	100%	100%
	(12)	(31)	(25)	(35)	(35)
Total cases in table: 138					
Excluded:					
Requests made in February: 22					
No data on turnaround: 91					

their improved turnaround time, this would seem to indicate that the time required for computer searches was being cut. (The trend on search time itself did indicate improvement, with the search time for about one-fifth of the requests made in the earlier months to none of those requests with January dates requiring more than three weeks. In addition, searches were completed within a week in about 10 percent more of the January cases.)[1]

The trend on type of search in State C is not quite as clear, but in general a declining proportion of the requests were orders for particular packets. Two-thirds of the requests dated September were packet orders (and were so answered), compared with 17 percent of the requests with January dates. More than 60 percent of the October requests received computerized search service, while almost all of the November requests were answered with packets. Computer searches again were used for 60 percent of the December requests and half of those in January. Figures on turnaround time in this state do not exhibit as steady a trend as in the other states. Conclusions as to whether the fluctuations are due to the type of service used, or even whether overall turnaround time is accurately reflected, are impossible to draw because of the paucity of data from this state. Clearly, the record-keeping procedures in this state were not as efficient as in States A and B. This observation points up the importance of complete and accurate record keeping for the monitoring of an information service. (Problems of record keeping were discussed in detail in the preceding chapter.)

The purpose of the request and the specificity of the topic, which earlier were found to be related to the type of search given, also have an apparent effect on the time required for answering the request (see Table 7.15). First, in all three states, those cases in which the form contained no stated purpose for the request, and those worded with the lowest degree of specificity received the fastest service. In States B and C, the reason is clear. These "non-purposeful" requests are answered with packets, as noted earlier, and the packet service is admittedly faster than the individualized computer search. In State A, where the greater part of the turnaround time is due to office processing, those requests which have no purpose stated, as well as those of lowest specificity, are not kept around the office as long as the others. Obviously, these requests have to be handled in a more routine manner since they give little guidance for type of search or relevance of the retrieved information to the client's need.

---

[1] State B was handling a steadily increasing proportion of its cases through its in-state facility, undoubtedly a factor in the improvement of turnaround time.

In State A, three-fourths of those requests with a definite purpose were sent for the information search within a week as were an almost equal percentage (71 percent) of those with no stated purpose. But the high proportion of definite-purpose requests receiving quick service in State A is due to requests whose stated purpose is to write proposals, position papers or speeches. Almost two-thirds of these requests had searches completed within a week, compared to only 39 percent of those with other definite purposes. In contrast to this latter figure, search times within this short period were recorded for 64 percent of those requests with vaguely stated purposes and 61 percent of those with no purpose stated.

TABLE 7.15

OVERALL TURNAROUND, ACCORDING TO WHETHER REQUEST HAD A DEFINITE PURPOSE

	Purpose		
Turnaround	Definite Purpose	Vague Purpose	No Purpose Specified
State A			
The percentage of cases completed:			
Within 1 week.	4%	2%	12%
1 to 2 weeks	10	14	21
2 to 3 weeks	25	20	34
3 to 4 weeks	20	18	18
More than 4 weeks. . .	41	46	15
	100%	100%	100%
N	(116)	(123)	(33)
No data:	7		
State B			
The percentage of cases completed:			
Within 1 week.	18%	14%	53%
1 to 2 weeks	21	28	19
2 to 3 weeks	27	29	14
3 to 4 weeks	18	13	7
More than 4 weeks. . .	16	16	7
	100%	100%	100%
N	(134)	(174)	(118)
No data:	3		
State C			
The percentage of cases completed:			
Within 1 week.	3%	11%	26%
1 to 2 weeks	19	27	45
2 to 3 weeks	34	36	13
3 to 4 weeks	25	8	10
More than 4 weeks. . .	19	18	6
	100%	100%	100%
N	(32)	(66)	(62)
No data:	91		

Similar differences in handling occur *after* the search is completed: 70 percent of those with *no* purpose specified were sent out within a week, but only 36 percent of those with a *vague* purpose and 46 percent of those with a definite purpose.

In summary, as Table 7.15 indicates, the fastest overall service is for those requests with *no purpose* stated. Those with *vague* purposes are held longer before a search is started, and again when the search is completed.

That those who stated topics with lowest *specificity* receive the speediest service (see Table 7.16) seems due to the same reasons. Fastest service in States B and C was provided for those requests which were simply orders for packets, microfiche copy or other specific articles or documents. But a high percentage of those requests which were stated with *low* specificity were also answered with packets only, explaining the faster turnaround time for these requests.

In State A, there is a shorter *search* time for those requests of *lowest* specificity (not shown here in tabular form). These requests were also least likely to be held in the office, especially *after* the search was completed. Also, fewer of the requests of low specificity were given manual service--which might help explain the fact that in 58 percent of these cases, materials were delivered to the requester *within a week* after the search was completed (compared to 46 percent of those with medium specificity and 29 percent of those with highest specificity). Only 10 percent of the low specificity requests were held longer than two weeks after the search was completed, compared to approximately 30 percent of the requests in the other two categories of specificity.

TABLE 7.16

OVERALL TURNAROUND TIME, ACCORDING TO SPECIFICITY OF TOPIC

	Specificity of Topic			Order for particular packet, microfiche, etc.
Turnaround	High	Medium	Low	
State A				
The percentage of cases completed:				
Within 1 week. . . .	5%	4%	2%	(2)
1 to 2 weeks	5	7	29	---
2 to 3 weeks	28	25	19	(1)
3 to 4 weeks	17	17	22	(1)
More than 4 weeks. .	45	47	28	(1)
	100%	100%	100%	(5)
N	(64)	(123)	(80)	(5)
No data:	7			
State B				
The percentage of cases completed:				
Within 1 week. . . .	18%	12%	12%	61%
1 to 2 weeks	20	21	29	23
2 to 3 weeks	25	31	36	7
3 to 4 weeks	16	18	13	4
More than 4 weeks. .	21	18	10	5
	100%	100%	100%	100%
N	(71)	(148)	(91)	(116)
No data:	3			
State C				
The percentage of cases completed:				
Within 1 week. . . .	10%	11%	4%	10%
1 to 2 weeks	14	20	42	64
2 to 3 weeks	41	32	35	12
3 to 4 weeks	21	13	11	7
More than 4 weeks. .	14	24	8	7
	100%	100%	100%	100%
N	(29)	(54)	(26)	(41)
No data:	80			
Not coded on specificity:	21			

One final effect of specificity and purpose of request concerns the provision of SEA assistance as indicated in the retrieval records. The frequency of personal assistance is of special interest because of the stated aim of the projects to bring consultants from the state department of education or from elsewhere into contact with school personnel. All three states rendered this type of assistance in about the same percentage of cases (State A, 14 percent; State B, 15 percent; and State C, 12 percent).

The provision of personal assistance to a requester in States A and B seems related to factors about the request itself, namely, it purpose and specificity. (See Tables 7.17 and 7.18.) In States A and B, requests with a definite purpose and those with more specifically worded topics were more likely to be given personal assistance. With respect to purpose, requesters seeking information for the writing of proposals or position papers, or for a specific program or innovation, were most likely to receive consultation, either directly from an SEA consultant or through the retrieval staff. (In the latter case, SEA advice was passed on to clients via the retrieval staff.) The SEA was not as likely to render such assistance to those who intended to write

---

[1] According to our survey of clients, the following percentages received the personal assistance of SEA staff: State A, 12 percent; State B, 17 percent; and State C, 21 percent. The major discrepancy between the reports of clients and the retrieval records occurs in State C where records were not as carefully kept as in the other two states. Thus, the more reliable figure is probably the one based on clients' reports.

TABLE 7.17

PROPORTION OF REQUESTS ANSWERED BY PERSONAL ASSISTANCE, ACCORDING TO PURPOSE OF THE REQUEST

Purpose of the Requests	State A	State B	State C
Definite purposes	19% (119)*	25% (135)	15% (40)
Writing proposals, position papers	25% (33)	23% (13)	25% (8)
Speeches, term papers	14% (22)	14% (7)	-- (8)
Specific program or innovation	17% (64)	24% (115)	17% (24)
Vague purpose	10% (127)	15% (176)	11% (84)
Purpose not specified	12% (33)	4% (118)	11% (127)
N	(279)	(429)	(251)

*Numbers in parentheses represent base numbers of percents.

TABLE 7.18

PROPORTION OF REQUESTS ANSWERED BY PERSONAL ASSISTANCE, ACCORDING TO SPECIFICITY OF TOPIC

Specificity of Topic	State A	State B	State C
High	31% (64)*	26% (73)	12% (42)
Medium	12% (130)	19% (149)	13% (69)
Low	2% (80)	11% (91)	10% (31)
Orders for packets, documents, etc.	20% (5)	3% (116)	3% (88)
N	(279)	(429)	(230)
No data	(---)	(---)	(21)

*Numbers in parentheses represent base numbers of percents.

speeches or term papers, a clear enough purpose but related to personal rather than institutional use. In State A, close to 30 percent of those requests with definite institutional purposes received personal help, but there was no difference according to whether a vague purpose or no purpose at all was given.

The effect of stating a topic with a high degree of specificity is more notable: almost half of the very specifically worded topics in State A were given personal assistance, while very few (4 percent) of those with least specificity were accorded this resource. In State B, approximately one-fourth of the requests with a definite institutional purpose and, similarly, of those worded most specifically were offered consultation or other assistance; while 10 percent fewer of the requests which mentioned only a vague purpose, or of those which were stated with a lower degree of specificity, received this help. Virtually none of those with no stated purpose received personal help. In State C, curiously enough, the purpose or specificity of the request seems to have had little influence on the provision of personal assistance.

Characteristics of the Requester or His Context

Another set of factors which might influence the service resides in the characteristics of the requester or of his context. The breakdown of the requesters' positions is remarkably similar in all three states, as seen in Table 7.19. Teachers account for one-third of the requests in States A and B, and a somewhat higher proportion in

TABLE 7.19

POSITION AND LEVEL OF CLIENTS

	State A		State B		State C	
School level						
Instructional staff (kindergarten-sixth)	20%		14%		18%	
Instructional staff (junior-senior)	12	33%	18	33%	20	41%
Instructional staff (grade unknown)	1		1		3	
Principal, assistant principal	20		14		24	
Other administrators, specialists	6	26%	11	25%	3	27%
District level						
Superintendent, assistant superintendent	4		5		4	
Other administrators, specialists	15		13		11	
Intermediate level (IED, county)	6		8		2	
State level (SEA staff)	8		5		12	
Colleges, universities	3		7		2	
All other	5		4		1	
	100%		100%		100%	
N	(273)		(427)		(218)	
No data	(6)		(2)		(33)	

State C. In-building administrative and supervisory staff members account for approximately one-fourth of the requests in all states.[1] Almost one-fifth of the requests originated with district-level personnel: the superintendents, supervisors, coordinators, or specialists who serve on the staff for the whole school district. In comparison with their ratio to the numbers of classroom teachers, who make up the preponderance of the school personnel, the in-building administrative and supervisory personnel are much more likely to have used the new retrieval services. Actually, this over-representation, compared to the breakdown of the state school staffs, applies not only to supervisors and administrators in individual schools, but to the school-district level as well. This is not surprising, since these staff members are presumably the leaders of the teaching staff, and since publicity and information efforts about the new service may have been more directly aimed at them.

Of more interest than differences in the proportion of requests from different positions would be differences in the type of service given according to the status of the requester. Table 7.20 indicates that in all three states, state department personnel were more likely

---

[1] One difference, apparent in the finer breakdown of the in-building administrative and supervisory personnel, reflects a difference in the school systems of the states. The three states have varying proportions of such personnel. In the primarily rural areas of State C covered by the pilot state experiment, for example, most schools were small and therefore had only a principal; in fact, the head of a school in State C was often a teaching principal and some principals had more than one school building under their jurisdiction. Thus, most of the State C requests in this category come from principals. In State B, where there are more supervisory and resource personnel in individual school buildings, requests come from these lower staff members as well as from principals.

TABLE 7.20

TYPE OF SEARCH BY POSITION OF REQUESTER

	Position*						
	Teachers			Administrators, Specialists			
	Elementary	Secondary	Total	In-Building	District, County, IED	Total	SEA
State A							
Manual only	22%	17%	20%	10%	17%	15%	4%
Computer only	17	20	18	26	18	21	46
Packet only	--	--	--	--	--	--	4
Manual and computer	39	53	45	61	55	57	41
Packet plus other	22	10	17	3	10	7	5
	100%	100%	100%	100%	100%	100%	100%
N	(36)	(30)	(66)	(39)	(71)	(110)	(22)
No data: 66							
State B							
Manual only	13%	17%	15%	19%	8%	13%	14%
Computer only	21	26	24	19	24	22	41
Packet only	30	40	36	36	40	38	32
Manual and computer	18	11	14	11	15	13	14
Packet plus other	18	6	11	15	13	14	--
	100%	100%	100%	100%	100%	100%	100%
N	(61)	(82)	(143)	(106)	(111)	(217)	(22)
No data: 3							
State C							
Manual only	13%	16%	15%	3%	11%	6%	8%
Computer only	25	33	29	15	14	15	42
Packet only	42	39	41	70	67	69	12
Manual and computer	--	4	2	3	5	4	25
Packet plus other	20	8	13	8	3	6	13
	100%	100%	100%	100%	100%	100%	100%
N	(40)	(49)	(89)	(60)	(36)	(96)	(24)
No data: 35							

---

*"Other" positions are omitted.

to receive computer only service than any other group (46 percent, 41 percent and 42 percent in States A, B, and C, respectively), and were least likely to receive packets in States B and C. Non-teaching school staff (i.e., administrators, supervisors and specialists) in State C tended to be serviced with packets. This is no doubt due to the fact that more than 60 percent of the requests from individuals in those positions were simply orders for packets. The Table also seems to indicate that in State A the non-teaching staff were much more likely to get a manual search plus computer search than were elementary teachers. These figures are slightly misleading, however, since all requests serviced by a "packet plus other" kind of search received a computer search, except two from secondary teachers. Thus, elementary teachers were more likely to get computer service combined with a packet (which, in State A, was generally a PREP kit) than were other categories. Such facts can be seen more clearly in the summary presented in Table 7.21.

As that table indicates, only in State C were SEA requests notably more likely to receive computerized retrieval services than those from any other group (75 percent of the SEA requests as opposed to about one-fourth of those from administrators, supervisors and specialists, and roughly one-third of those from teachers). Virtually as high a proportion of requests from in-building administrative and specialist staff members in State A and from elementary teachers in State B received computer searches as did SEA requests, and differences for other categories in those two states are not great. In State C, SEA requests were more likely to receive more than one type of service; in the other two

TABLE 7.21

PROPORTION OF CASES RECEIVING DIFFERENT TYPES OF SEARCH

	Position						
	Teachers			Other School Staff: Administrators, Specialists			
	Elementary	Secondary	Total	In-Building	District, County, IED	Total	SEA
State A							
Percentage receiving computer service	78%	77%	77%	90%	83%	86%	91%
Percentage receiving other service in addition to computer search	61	57	59	64	65	65	50
N	(36)	(30)	(66)	(39)	(71)	(110)	(22)
State B							
Percentage receiving computer service	52%	40%	46%	37%	46%	42%	54%
Packets	48	46	47	51	52	52	32
More than one type of service	36	17	25	26	28	27	14
N	(61)	(82)	(143)	(106)	(111)	(217)	(22)
State C							
Percentage receiving computer service	32%	39%	36%	25%	22%	24%	75%
Packets	63	47	54	77	69	75	25
More than one type of service	20.	12	16	11	8	10	38
N	(40)	(49)	(89)	(60)	(36)	(96)	(24)

states, they were less likely to do so than requests from most other categories.

Aside from these differences in the type of service rendered to requesters in different positions, there is, in one state, an extreme difference in the turnaround time required for servicing requests according to position. In State A, as Table 7.22 shows, 61 percent of the requests from elementary teachers took more than four weeks for servicing. In contrast, less than half that proportion (approximately 30 percent) of state department personnel and of district-level staff members were kept waiting so long. Notably, secondary teachers received service just as speedily--or more so--than the other school staff or state department members. In fact, turnaround time would vary quite consistently according to organizational rank, with higher ranking statuses getting faster service, except for the column representing requests from in-building administrative and supervisory staffs. However, most of these requests (74 percent) are from principals and lower administrative staff members in elementary schools. This suggests that speed of service in State A depends on status as measured by the level of the school, rather than on the administrator-teacher division. However, virtually all of the requests from elementary school teachers, and the great majority of those from in-building administrative and supervisory staff members, came through the field agents, and this factor--the method of referral for a request--also affected the service given, as we will see in the next section.

TABLE 7.22

OVERALL TURNAROUND TIME BY POSITION*

	Position						
	Teachers			Administrators, Specialists			
	Elementary	Secondary	Total	In-Building	District, County, IED	Total	SLA
State A							
The percentage of cases:							
Within 1 week	2%	3%	2%	4%	4%	4%	9%
1 to 2 weeks	20	18	20	7	13	10	13
2 to 3 weeks	6	43	19	20	34	27	30
3 to 4 weeks	11	6	9	25	21	23	18
More than 4 weeks	61	30	50	44	28	36	30
	100%	100%	100%	100%	100%	100%	100%
N	(54)	(33)	(87)	(69)	(71)	(140)	(23)
N = 267							
No data: 12							
State B							
The percentage of cases:							
Within 1 week	22%	19%	20%	27%	29%	28%	41%
1 to 2 weeks	22	25	23	24	24	24	14
2 to 3 weeks	28	27	28	26	21	23	18
3 to 4 weeks	12	17	15	12	9	11	9
More than 4 weeks	16	12	14	11	17	14	18
	100%	100%	100%	100%	100%	100%	100%
N	(60)	(81)	(141)	(106)	(111)	(217)	(22)
N = 424							
No data: 5							
State C							
The percentage of cases:							
Within 1 week	13%	24%	18%	13%	18%	15%	11%
1 to 2 weeks	28	24	26	45	45	45	22
2 to 3 weeks	41	32	36	10	18	14	34
3 to 4 weeks	9	9	9	13	4	9	22
More than 4 weeks	9	11	11	19	15	17	11
	100%	100%	100%	100%	100%	100%	100%
N	(32)	(34)	(66)	(31)	(27)	(58)	(18)
N = 146							
No data: 95							

---

*"Other" positions are omitted.

Turnaround time for servicing requests in State A varies so much according to the position held by requesters that a complete breakdown of the time required for different steps in the retrieval process for different statuses is presented in Table 7.23. The special advantage in speediness of service given requests from secondary teachers at every step in the process is noticeable. In addition, higher percentages of the requests from secondary teachers were received directly by the reference center (and on the same day) and material was sent back directly to them, rather than through intermediaries such as field agents.

The provision of personal assistance to a requester also varied according to position, but somewhat differently in each state, as seen in Table 7.24. In all three states, as one would expect, consultant help was rarely given to SEA personnel. (The few cases of personal assistance rendered SEA staff members represent summaries written by retrieval staffs, presumably of advice or suggestions from experts outside the state department.) In State A, administrators and specialists at district or county levels were slightly more likely to receive consultation or help than other requesters; and in State B, elementary teachers were less likely to receive personal assistance than others. In State C, teachers were more likely to be given such aid than administrative or specialist staff members, either on the building or district level.

TABLE 7.23

STATE A: BREAKDOWN OF TIME REQUIRED FOR DIFFERENT STEPS IN RETRIEVAL PROCESS BY POSITION OF USER*

	Position				
	Teachers		Administrators, Specialists		
Time Required for Different Steps	Elementary	Secondary	In-Building	District, County	SEA
Request received					
Same day	2%	31%	9%	19%	39%
Within 3 days	67	28	23	46	30
From 4 to 7 days	24	38	65	24	22
More than 1 week	7	3	3	11	9
	100%	100%	100%	100%	100%
N	(54)	(32)	(69)	(74)	(23)
Search started					
Within 3 days	11%	28%	39%	49%	28%
From 4 to 7 days	32	24	22	23	55
From 1 to 2 weeks	16	43	39	23	17
More than 2 weeks	42	5	--	5	--
	100%	100%	100%	100%	100%
N	(19)	(21)	(31)	(57)	(18)
Search completed					
Within 3 days	(3)	30%	26%	35%	53%
From 4 to 7 days	(4)	50	16	23	13
From 8 to 10 days	(6)	5	26	28	--
From 11 to 14 days	--	15	16	7	7
More than 14 days	--	--	16	7	--
	(13)	100%	100%	100%	100%
N	(13)	(20)	(19)	(43)	(15)
Material returned					
Within 3 days	(1)	29%	32%	24%	27%
From 4 to 7 days	(1)	33	16	21	46
From 1 to 2 weeks	(4)	19	21	31	20
From 2 to 3 weeks	(2)	9	10	12	7
More than 3 weeks	(5)	10	21	12	--
	(13)	100%	100%	100%	100%
N	(13)	(21)	(19)	(42)	(15)
No data: (155)	(42)	(13)	(51)	(32)	(8)

*"Other" positions omitted.

TABLE 7.24

PERSONAL ASSISTANCE, ACCORDING TO POSITION OF REQUESTER

Percentage of Requests Receiving Personal Assistance	State A	State B	State C
Positions			
Teachers			
Elementary.	11% (55)	8% (61)	12% (40)
Secondary	18% (34)	16% (83)	22% (49)
Other school staff			
Administrative, supervisory, resource personnel			
In-building.	7% (70)	21% (106)	7% (60)
District level, county, regional	24% (74)	19% (111)	17% (36)
State Department of Education	4% (23)	4% (22)	12% (26)
Other (college faculty and students, parents, R and D lab personnel, etc.), community and government . .	17% (17)	2% (44)	-- (7)
No data	(6)	(2)	(33)

---

[*] Numbers in parentheses represent the base numbers of percentages.

Method of Referral

Retrieval service may also be influenced by the way in which requests for information come to the center. Although we coded various factors related to the referral process, the critical one seems to be whether the request came through one of the field agents who was part of the pilot state experiment.

As Table 7.25 indicates, somewhat varying proportions of the total requests in the three states came through the project field agents. In only one state (B) did less than half of the requests come through the field agents, and that state had by far the largest percentage of requests (other than those from SEA personnel) coming directly from the requesters to the retrieval center.

TABLE 7.25

HOW REQUESTS WERE RECEIVED BY THE REFERENCE CENTER

	State A	State B	State C
Target area (through field agent)	54%	44%	62%
Non-target area			
Through a representative	20	10	18
Not through a representative (including SEA)	26	46	20
	100%	100%	100%
N	(277)	(428)	(229)
No data	(2)	(1)	(22)

In all three states, there are apparent differences in type of service according to whether the request was forwarded through a project field agent, through one of the newly-appointed representatives of the information service, or came directly from the requester.

In State A, Table 7.26 indicates that requests forwarded to the reference center through the field agents were somewhat more likely to be handled by a manual search only, especially in comparison with those requests from newly designated non-target representatives. In fact, the most comprehensive kind of retrieval service in State A seems to have been rendered to the requests from non-target districts. They were given computer searches in almost all of the cases (94 percent of the non-target representative requests[1]). Requests through target area field agents were less likely to receive computer searches and notably less likely to receive a manual search in addition to computerized retrieval services (42 percent *vs*. 70 percent from non-target representatives). Since our survey occurred during the second year of the project, perhaps this difference in service resulted from a concerted effort to win new clients and expand the service into these other districts. On the other hand, since the number of requests from the target areas far exceeded those from the non-target areas with representatives, it may have been a result of differential work loads for the individuals in the office responsible for each of these two sources of requests.

---

[1] All requests on the "packet plus other search" line received computer searches, except two (3 percent) which came directly to the reference center.

TABLE 7.26

TYPE OF SEARCH, ACCORDING TO WHETHER REQUEST CAME THROUGH A FIELD AGENT

	Referral Process		
	Target Area	Non-Target Area	
Type of Search	(Through a Field Agent)	Through a Representative	Not Through a Representative*
State A			
Manual search only. . . .	21%	6%	16%
Computer search only. . .	26	13	27
Packet only	--	--	1
Computer and manual search.	42	70	50
Packet plus other search.	11	11	6
	100%	100%	100%
N	(95)	(53)	(68)
No data: (63)			
State B			
Manual search only. . . .	14%	24%	10%
Computer search only. . .	26	36	26
Packet only	32	21	44
Computer and manual search.	16	2	12
Packet plus other search.	12	17	8
	100%	100%	100%
N	(189)	(42)	(196)
No data: (2)			
State C			
Manual search only. . . .	6%	2%	5%
Computer search only. . .	22	71	42
Packet only	57	17	35
Computer and manual search.	4	3	11
Packet plus other search.	11	7	7
	100%	100%	100%
N	(142)	(42)	(43)
No data: (24)			

---

*Includes SEA requests.

In State B, requests coming through the field agents were most likely to receive comprehensive service. Although the service had been advertised to schools in non-target areas some months earlier, the new representatives in that state were just being designated at the time of our survey. Thus, many of the requests from those areas came directly from requesters to the information center, a high proportion being letters which requested specific packets. (The 44 percent of the direct requests answered by packets only reflects these orders by letter. Also, approximately half of the requests through project field agents answered by "packet only" were orders for specific packets.)

In State C, requests from field agents were notably less likely to receive computer searches and more likely to be answered with packets only. Almost half of the requests from field agents in that state (48 percent) were simply packet orders, and three-fourths of the requests received directly were from SEA personnel, who--as we noted previously--were given computerized searches much more frequently than persons in other positions in that state. In State C, the service had not "officially" been extended to school districts which were not in the original target areas. The column on "non-target representative" reflects primarily the efforts of one state department coordinator who had, in effect, become a kind of unofficial field agent. Her enthusiasm about the resources brought within reach by the retrieval center was passed on to clients who used the media center which she directed. This quasi-field agent ordered many packets through the service and made them available to clients at her center. In addition, she used the service heavily for its individualized computer search potential, ordering such searches for her clients if they were not eligible to request services in their own names. The figure of 71 percent for computer searches through a non-target representative reflects her activities.

Not only the type of search, but also the time required for servicing varied according to whether requests came through field agents. (See Table 7.27.) In all three states, the category with the highest percentage of cases taking the longest time for servicing (more than 4 weeks) covers the field agents. In State A, more than half the field agents'requests (52 percent) required more than four weeks before material was delivered. This is about twice the proportion requiring that long for servicing of requests which came directly to the reference center or through the non-target representatives. The differences are not so great in the other two states, although in State B a significantly lower percentage of the field agent requests have an overall turnaround of a week or less.

Since the clients of field agents were not receiving a more comprehensive search (judging from our statistics on type of search rendered), this apparent discrimination against the clients of the field agents in States A and B is rather puzzling. An alternative explanation is that the field agents turned in requests with greater specificity of topic, thereby increasing the turnaround time for field agent requests in general. It is a fact, however, that field agent requests were no more specific than requests submitted by district representatives or requests submitted directly to the retrieval center. The only exception to this conclusion occurs in State A where field agent requests tended to be more

TABLE 7.27

OVERALL TURNAROUND TIME, ACCORDING TO WHETHER REQUEST CAME THROUGH A FIELD AGENT

	Referral Process		
	Target Area	Non-Target Area	
Turnaround Time	Through a Field Agent	Through a Representative	Not Through a Representative*
State A			
The percentage of cases completed:			
Within 1 week	4%	2%	7%
From 1 to 2 weeks	14	11	13
From 2 to 3 weeks	14	26	42
From 3 to 4 weeks	16	37	11
More than 4 weeks	52	24	27
	100%	100%	100%
N	(146)	(54)	(70)
No data: (9)			
State B			
The percentage of cases completed:			
Within 1 week	14%	40%	34%
From 1 to 2 weeks	24	21	22
From 2 to 3 weeks	31	10	22
From 3 to 4 weeks	14	19	11
More than 4 weeks	17	10	11
	100%	100%	100%
N	(188)	(42)	(195)
No data: (4)			
State C			
The percentage of cases completed:			
Within 1 week	9%	--	15%
From 1 to 2 weeks	33	33%	42
From 2 to 3 weeks	31	33	21
From 3 to 4 weeks	9	25	15
More than 4 weeks	18	9	6
	100%	100%	100%
N	(88)	(24)	(33)
No data: (84) turnaround (22) FA or no			

---

[*] Includes SEA requests.

specific than direct requests. But they were no more specific than requests routed through district representatives, who enjoyed faster turnaround than field agents in State A as well as in the other two states. The specificity of topics according to how the request came to the retrieval center (through field agent, through district representatives, or directly) is shown in Table 7.28.

As noted above, the slower turnaround for field agent requests might have been due to differential workloads in the retrieval office of State A. Or it could have been due to the eagerness to service the independent requester for whom no field agent follow-up was possible in both States A and B. This issue will be pursued further in the next chapter.

A summarization of the many findings and interpretations that we have presented in the present chapter is certainly in order. The following chapter, therefore, sums up our data on retrieval processes.

TABLE 7.28

SPECIFICITY OF TOPIC ACCORDING TO WHETHER REQUEST CAME THROUGH A FIELD AGENT, A DISTRICT REPRESENTATIVE OR DIRECTLY TO THE RETRIEVAL OFFICE*

		State A	State B	State C
Through a Field Agent				
Specificity:				
High		31%	18%	21%
Medium		40	45	60
Low		29	37	19
		100%	100%	100%
	N	(65)	(135)	(24)
Through a District Rep.				
Specificity:				
High		27%	28%	33%
Medium		46	48	45
Low		27	24	22
		100%	100%	100%
	N	(48)	(25)	(9)
Direct to Office				
Specificity:				
High		6%	35%	25%
Medium		71	46	54
Low		23	19	21
		100%	100%	100%
	N	(31)	(63)	(24)

---

*For purposes of better comparison between field agent and non-field agent requests, SEA and college or university requests are excluded from this table. The latter were generally direct requests.

CHAPTER 8

SUMMARY AND CONCLUSIONS REGARDING RETRIEVAL ACTIVITIES

The preceding chapter has covered so many variables in the retrieval process that a summary chapter was deemed necessary to give the reader an overall view for each state.

We have seen that four factors affect the service furnished by retrieval centers: purpose of the request, specificity of the topic, position of the requester, and method of referral (field agent vs. other). In addition, we have shown that these features are highly interrelated.

The most notable observation, however, is that classroom teachers were not likely to make requests for information except through a field agent. This was especially true in States A and C, and overwhelmingly so for elementary teachers. Ninety-two percent and 94 percent of the requests from elementary teachers in States A and C, respectively, were made through field agents. In State B, the majority of requests from teachers also came via a field agent, but a substantial minority came directly to the information service. (To a slightly lesser degree, the same held true for building administrative and supervisory staff.) The main point, however, is that personnel on the district level in all three states were more likely than individuals at lower levels to make requests directly to the retrieval service.

Finally, we have shown that requests handled by field agents were more likely to have vague purposes, and to be worded with only moderate specificity. These latter results could suggest that field agents are not adequately helping clients define their information needs. In view of the highly select nature of non-target requesters, however, the appropriate interpretation is that field agents elicited requests from clients who would not otherwise have used the service, that is, individuals less strongly motivated to seek new information on their own.

A summation of the influence of these factors on the retrieval service can best be made in terms of the individual states.

State A

Routing of a request through field agents was responsible for more variation in turnaround than other factors. Field agent requests took longer to service despite the fact that they received less comprehensive (multi-search) service than other requests. And while field agents' requests more often originated with teachers, and were therefore more often vague in purpose, when we control for these factors slower turnaround remains. Thus, only 38 percent of teachers' requests through field agents were answered within a month, compared with 86 percent of teachers' requests not through field agents. And only 42 percent of the requests with vague or no statement of purpose which were routed through field agents were answered within a month, compared with 93 percent of such requests not through field agents. The only sub-group which received equally fast service in target and non-target areas was administrators who made requests with definite purposes. In short, it was mainly the teachers in the target areas who received slower service. All of these facts can be observed in summary Tables 8.1 and 8.2.

TABLE 8.1

STATE A: THE PROPORTION OF CASES SERVICED IN LESS THAN FOUR WEEKS

	Field Agent Requests				Non-target area Requests*			
	47% (137)				89% (89)**			
Position:	Teacher		Higher Status		Teacher		Higher Status	
	38% (65)		54% (72)		86% (22)		76% (67)	
Purpose:	Vague, None		Definite		Vague, None		Definite	
	42% (96)		59% (41)		93% (43)		65% (46)	
Purpose & Position:	Teacher		Higher Status		Teacher		Higher Status	
	Vague, None	Defin.	Vague, None	Defin.	Vague, None	Defin.	Vague, None	Defin.
	33%	57%***	51%	59%	93%	71%***	93%	64%
N	(51)	(14)	(45)	(27)	(15)	(7)	(28)	(39)

---

* Requests from SEA personnel were excluded in order to make field agent and non-target clients more comparable. Seventy percent of the SEA requests were serviced within four weeks. Requests from non-school personnel were also excluded, and 53 percent of these were serviced within the average turn-around time. Thus, the summary table above represents only school personnel: teachers and administrative staff at building, district or county office levels.

** The numbers in parentheses are bases of percentages.

*** On the final line, so few requests from teachers had a definite purpose that the N's in this category for both Field Agent and Non-target Area requests are too small to allow valid conclusions. The percentages have been supplied here to provide a complete picture.

TABLE 8.2

THE PROPORTION OF CASES RECEIVING A COMPREHENSIVE SEARCH (MORE THAN ONE TYPE OF SEARCH)*

	Field Agent Requests				Non-target area Requests			
	54% (88)				72% (87)**			
Position:	Teacher		Higher Status		Teacher		Higher Status	
	60% (45)		49% (43)		67% (21)		74% (66)	
Purpose:	Vague, None		Definite		Vague, None		Definite	
	62% (55)		42% (33)		66% (41)		78% (46)	
Purpose & Position:	Teacher		Higher Status		Teacher		Higher Status	
	Vague, None	Defin.	Vague, None	Defin.	Vague, None	Defin.	Vague, None	Defin.
	59%	62%***	68%	36%	53%	100%***	73%	75%
N	(37)	(8)	(18)	(25)	(15)	(6)	(26)	(40)

---

* SEA staff are excluded.

** The numbers in parentheses are bases of percentages. As will be noted, data on the type of search supplied was not recorded on the forms in a significant number of cases. The great majority of these forms on which there was no data (80%) represented field agent requests for elementary teachers and building administrative and supervisory personnel. This explains the large reduction in the number of field agent cases in Table 8.2 compared with that in Table 8.1.

*** Again, on this final line, the total N in these two categories is too small to allow definitive conclusions.

When we turn our attention to comprehensiveness (multi-searches) of the service, it is the administrators in the target areas who were less likely to receive more than one kind of search. In particular, administrators with definite purposes were far less likely to receive a comprehensive search in the target areas than in the non-target areas (36 percent *vs*. 75 percent, respectively,).[1]

Several conclusions can be drawn from these data. First, the turnaround time in State A seems excessive, and statements made by the State A project staff at various dissemination meetings suggest that they were not aware of the actual time usually required for answering requests. Since the longer turnaround times are so frequently associated with target area requests, the possible handicap under which this places the field agents in State A should be seriously considered. Perhaps it was the knowledge that an agent was in touch with a client which led the retrieval staff to suppose that the field agent would bear a good part of the burden of keeping requesters satisfied so that they could afford to service other clients first. However, this is mere speculation on our part.

Although qualitative data from State A has been scarce, we suspect that there is another explanation. From the outset, the State A project exemplified a highly formalized structure, a point which is discussed more fully in Part IV. One aspect of this formalization was a clearly stated division of labor among the retrieval staff members, with two professionals assigned to handle field agent requests and two others in charge of the non-target areas. Yet, the majority of requests during the initial year as well as during the period of our survey originated in the target areas. To the extent that this division of labor was rigidly adhered to, there would have been some discrepancy in the case loads of individual retrieval staff members. State A, despite the fact that it had a retrieval staff at least twice as large as those of the other states and a request rate considerably lower than one of the other states, may have suffered from problems of retrieval overload with regard to target areas. This would account for the slower turnaround for target area clients. Further, there might have been a tendency to serve administrators with definite purposes faster than other sub-groups in the target area because of (1) the importance of gaining administrative support for the project, and (2) the relative ease of answering a definite-purpose request.

---

[1] Full tabulations for State A can be found in Appendix K.

The critical point here is the existence of overload, or at least of a big build-up of cases. If this occurs, then the guidelines on which a retrieval staff is operating are likely to change considerably, and perhaps especially in terms of turnaround. Priorities, either consciously or unconsciously, concerning who gets serviced first will have to develop--and to some extent these criteria may be in terms of the higher status of the requester. The logical result, then, will be slower service to requesters of lower status.

The main explanation for differences in the handling of target area and non-target area requests in State A may be the existence of such a backlog for one set and not for the other. Not having fallen behind, those servicing non-target areas moved on requests sooner after they were received and provided additional services faster after the computer search was finished. In view of these problems, it might be inadvisable to specialize by target *vs*. non-target requests in the retrieval office.

The retrieval staff may also have responded to a further difference in their requesters. *Teachers* in the target areas were predominately at the elementary level (78 percent), while almost all of the requesters in non-target areas who were teachers were on the secondary level. (In addition, we suspect that many of these secondary teachers were individuals who had been designated as district representatives and were "trying out" the service themselves.) Thus, because they were able to provide multi-faceted searches in an exceedingly high percentage of all cases due to the absence of overload, when they had to make choices they tended to give even more comprehensive service to those requests which had a *clear and definite purpose*. A high proportion of the non-target requests did have a definite purpose and many of these concerned writing proposals or position papers (three-fourths of the requests with such purposes came from non-target areas). This would explain why these definite-purpose requests took longer for servicing than those with vague purposes. However, requests from *administrative and supervisory* personnel which had only vague purposes were accorded more than one kind of search with no increase in turnaround time. There is some indication that although teachers were served as fast as those in higher positions, they may have been less likely to get more than one kind of search if their request cited only a vague purpose. But there were so few requests from teachers in the non-target areas that this conclusion cannot be drawn with certainty.

These issues--excessive turnaround time, the possible reason for overload and the priorities and practices which apparently result--should be viewed even more seriously in light of the strong emphasis placed in State A on the extension of the services of the information center to ever increasing areas. Under its continuation funding in 1972, the target areas of the pilot project were quadrupled (from two districts to eight). One of the original field agents was made responsible for requests from four counties, and the other agent for the three school districts in one county (including the initial target area) plus all of an adjacent county. In addition, State A, even during the first year of the project, had placed great emphasis on opening up the service to requesters in all school districts in the state with one staff member of the school district designated to serve as liaison with the information center. Most school districts in the state have appointed such representatives, and State A's first quarterly report for 1972 noted that one such representative was already submitting approximately the same number of requests as the field agents.

That report, in listing the problems of the retrieval service, stated:

> The volume of requests continues to increase weekly. Continual adjustment must be made within the retrieval component to produce the product at an ever increasing rate. If the adjustment were not continuously made, a monthly limit of requests already would have been established...Time seems to be the greatest constraint...

The report proceeded to explain that the production of papers containing compilations and summaries of all available research on a topic, an additional activity initially planned and sometimes attempted by this information service, was limited because of "the lack of available time".

Extending the service to all school personnel in the state on an equal basis undoubtedly is the necessary eventual course for a retrieval center. But there would seem to be a clear danger that an increase in the number of requests in this state, which already has problems handling its current request rate, is likely to lead to an even longer turnaround time and a freezing of priorities which apparently have emerged as a result of overload.

State B

The clearest conclusions to emerge from the data on State B are that turnaround time was determined by the type of search used, and that type of search was highly related to the purpose of the request and the specificity of its topic. The primary element in variation in turnaround time was the existence of packets. Packet "orders" accounted for three-fourths of the forms which cited no purpose, and packet service was much faster. In general, these factors seemed much more significant in affecting the service and its speediness than any differences according to the position of requesters.

State B, it should be noted, used the available packet services as an additional resource, one which was most helpful in controlling the turnaround problem and in efficiently answering vaguely worded and relatively unformulated requests. This suggests a sensible and proper place for pre-packaged materials in the battery of resources used by a retrieval service. The State B staff apparently resisted the temptation, which is a great danger with the availability of packet resources, of turning the retrieval center into a packet-ordering business.

In State B as in State A, however, service was slower for requests sent in by field agents than for requesters from non-target areas.[1] This apparently was due to differences in the type of service accorded to field agent requests. For one thing, in State B at least, requests coming through field agents were much less likely to be simply orders for packets than were those from requesters in other areas. For every position of requesters, if a field agent was involved, then a lower percentage of the requests were packet orders. Among school personnel, those in administrative positions were not only more likely than teachers to make requests on their own but were also more likely to order packets. This effect was much reduced, however, if a field agent was involved: among their requests, administrative and supervisory personnel were only slightly more likely to order packets. (See Table 8.3.)

---

[1] In one way, the pattern for the two states on this matter was very different, as will be recalled from Table 7.29 in the preceding chapter. In State B, requests from field agents were less likely to receive faster service than those from non-target areas, but the percentage difference according to method of referral becomes progressively less, so that field agent requests were not much more likely to require a very long period for servicing. Just the reverse was true in State A, where field agent requests were as likely as those from non-target areas to be serviced within two weeks, but a much higher percentage of field agent requests received slow service (requiring more than four weeks).

Turnaround time for State B in this section will be presented as the percentage of cases serviced within two weeks, since that is the weekly cut-off closest to the average turnaround time for that state. It should be noted that this is only half as long as the time period used in the summary section for State A because their average turnaround time was so much greater.

TABLE 8.3

STATE B: PACKET ORDERS, ACCORDING TO POSITION AND METHOD OF REFERRAL

	Teacher		Admin., Supervisory			
	Elem.	Second.	In-Bldg.	District, Co., IED	SEA	Total
The % of Requests Which Were Packet Orders:	23% (61)*	19% (83)	28% (106)	33% (110)	32% (22)	27% (382)
Through Field Agents	20% (35)	10% (50)	13% (53)	22% (45)	--	16% (183)
From Non-Target Areas	27% (26)	33% (33)	43% (53)	40% (65)	32% (22)	37% (199)

Excluded:
"Other" 44
No data 3

*Numbers in parentheses are bases of percentages.

Although field agents sent in fewer packet orders, there was much less difference in the proportion of requests answered by packet-only service according to method of referral. More field agent requests which were not simply orders for packets were nonetheless serviced by packets than was true for requests coming from non-target areas. (See Table 8.4.)

TABLE 8.4

STATE B: PACKET ORDERS AND PACKET SERVICE,
ACCORDING TO POSITION AND METHOD OF REFERRAL

	Teacher		Admin., Supervisory			
	Elem.	Second.	In-Bldg.	District, Co., IED	SEA	Total
Through Field Agent						
% Packet Orders	20%	10%	13%	22%	--	16%
% Serviced by packets only	29%	37%	25%	42%	--	33%
N	(35)*	(49)	(53)	(45)		(182)
% difference:	9	27	12	20	--	17
Non-Target Area						
% Packet Orders	27%	33%	43%	40%	32%	37%
% Serviced by packets only	31%	46%	47%	38%	32%	40%
N	(26)	(33)	(53)	(65)	(22)	(199)
% difference	4	13	4	-2	0	3

*The figures in parenthesis are bases of percentages.

When these factors--type of service and its speediness, position and method of referral--are considered simultaneously, type of service is apparently highly related to turnaround time. When field agent requests are compared with those from non-target areas, building administrators show the greatest percentage difference in turnaround time. They also show the greatest percentage difference in proportion of requests serviced by packets only (the fastest type of service) and in proportion receiving comprehensive service (more than one kind of search). (See Table 8.5.) Compared with field agent requests, twice as many requests from these personnel in non-target areas were serviced within two weeks (34 percent vs. 68 percent). Also, nearly twice as many of them received only packet service (25 percent vs. 47 percent) and less than half as many received more than one type of search (36 percent vs. 17 percent). Conversely, the position for which there was the least difference in turnaround time between field agent requests and those from non-target areas (i.e., elementary teachers) reveals no difference in the percentage of requesters receiving packet-only service. Also, elementary teachers in non-target areas were more likely to receive comprehensive service.

Thus, the data seem to indicate that the reason for the generally slower turnaround for field agent requests was the type of service rendered. But this reason does not explain why there was variation in the service rendered for those in different positions. The answer to this question apparently is that the type of search varied according to the purpose of the request, and that the presence of a field agent affected the statement of a purpose differently for those in different statuses.

TABLE 8.5

STATE B: TURNAROUND TIME AND TYPE OF SERVICE, ACCORDING TO POSITION AND METHOD OF REFERRAL

	Position					
	Teacher		Admin., Supervisory			
	Elem.	Second.	In-Bldg.	District, Co., IED	SEA	Total
Turnaround						
% Completed within two weeks:						
Through Field Agent	41%	37%	34%	45%	--	39%*
Non-Target Area	46%	53%	68%	57%	55%	58%
% Difference	5	16	34	12	--	19
Type of Service						
% Serviced by Packets Only:						
Through Field Agent	29%	37%	25%	42%	--	33%
Non-Target Area	31%	46%	47%	38%	32%	40%
%Difference	2	9	22	-4	--	7
% Receiving More Than One Type of Search:						
Through Field Agent	31%	21%	36%	29%	--	29%
Non-Target Area	42%	12%	17%	28%	14%	23%
% Difference	11	-9	-19	-1	--	-6
N's						
Turnaround						
Through Field Agent	(34)	(49)	(53)	(45)	--	(181)
Non-Target Area	(26)	(32)	(53)	(65)	(22)	(198)
Type of Service						
Through Field Agent	(35)	(49)	(53)	(45)	--	(182)
Non-Target Area	(26)	(33)	(53)	(65)	(22)	(199)

*See bottom of table for bases of percentages.

As noted previously, few request forms which were forwarded through field agents did not cite a purpose, while a higher percentage mentioned only vague purposes. There seemed little difference between field agent and non-target requests with respect to definite purposes, however. But once the position of requesters is simultaneously controlled, there are considerable differences in percentage of requests with definite purposes according to whether a field agent was on the scene. (See Table 8.6.) For example, more of the requests from building administrators which came through a field agent had a definite purpose than did those which came from non-target areas (36 percent *vs*. 21 percent). This was also true, but to a lesser extent, of requests from secondary teachers. But a lower proportion of the field agent requests from *elementary* teachers and *district and county level* staff cited a definite purpose.

TABLE 8.6.

STATE B: THE PURPOSE OF REQUEST ACCORDING TO POSITION AND METHOD OF REFERRAL

	Teacher		Admin., Supervisory			
	Elem.	Second.	In-Bldg.	District, Co., IED	SEA	Total
% with definite purpose:	38% (61)	32% (83)	28% (106)	33% (111)	18% (22)	31% (383)*
Excluded:						
Other 44						
No data 2						
Through Field Agent	34% (35)	36% (50)	36% (53)	24% (45)	--	33% (183)
From Non-Target Area	42% (26)	27% (33)	21% (53)	40% (65)	18% (22)	31% (199)

(No data-1)

*The numbers in parentheses are bases of percentages.

Thus, in summary, turnaround time varied primarily according to the type of service given, and type of service was greatly influenced by the purpose of the request. But the presence of a field agent was related to whether a definite purpose was cited for the request, and this relationship varied with the position of the requester.

Data also indicate that field agent requests with a vague purpose or none were slightly more likely than similar requests from non-target areas to be serviced with only a packet. (See Appendix K). Actually, this effect holds for only type of position--administrative and supervisory personnel on the district, county or regional level. For these requesters, as already shown in Table 8.4, there is a difference of 20 percentage points between the proportion of field agent orders for packets and the higher proportion of requests serviced only by packets. Clients in comparable positions in non-target areas, on the other hand, represented the only category in which the percentage of requests serviced only by packets was lower than the percentage of orders for packets. Requests from such clients in non-target areas were equally likely to receive more than one kind of search regardless of whether they had a vague or a definite purpose. But 40 percent of the field agent requests with a vague purpose from such clients were serviced with packets only (the ones with a definite purpose, on the other hand, were notably unlikely to receive only a packet). These cases may have represented deliberate decisions, even though perhaps it was not stated as a generalized policy. The retrieval service may have interpreted vaguely worded requests as an attempt on the part of the field agent to initiate a relationship with an administrator or supervisor, and may have decided, therefore, that speedy service via packets was more important than comprehensive service.[1]

Qualitative information about retrieval operations in State B indicated that field agent requests were consciously given more individualized attention than those from non-target areas. As the number of requests increased during the second year of the project, the retrieval center had to cope with a greatly increased work load. The policy of giving top priority to requests from the target districts, while attempting to find ways of servicing the increased demand, was explicitly adopted by the staff. Earlier, the retrieval center tried to devise techniques to insure special service to requests which were "favorite" projects of the field agents. Retrieval personnel asked the field agents to keep them informed about which requests had high priority with the agent. It was suggested that each retrieval specialist keep a list of these on his desk, so that if he came across any pertinent material he could automatically send it out to these high priority clients.

Finally, it should be mentioned again that the basis of operations in State B changed considerably after the collection of our quantitative data. Actually, during the period of our survey they were gradually switching from use of the regional service to their own in-state facility. The majority of the requests received during the early months of our survey were referred to the regional installation, because there was a contract for such services and their in-state cost-per-search was still high. By the end of our survey, this balance had reversed and a greater number of requests were being referred to the in-state computer center than to the regional installation. A few months later, the change-over had been completed and virtually no requests were referred to the regional facility.

---

[1] Full cross-tabulations of the joint effects of purpose, position and method of referral on the turnaround time and the type of service given in State B can be found in Appendix K.

Concurrently, and as a part of this change, the State B retrieval staff was de-emphasizing the use of packets and hard copy materials, and promoting individualized computer searches and the use of microfiche copy by clients. Aside from the fact that the packets of the regional center were not available once State B became totally self-reliant, the retrieval staff was dubious about the ultimate usefulness of packets: "I'm not sure how much we believe in them," was the director's conclusion. Thus, they preferred to deliver computer printouts of abstracts which were retrieved through an individualized search rather than sending packets. And, as soon as they were able to furnish such service at what they considered a "realistic" cost--one the client would be willing to pay himself if the service ever had to operate on such a basis--they switched to this type of service.

State C

Detailed analysis of the inter-relationships among the major causal factors and their joint effects on speediness and type of service is not possible for State C because of the high proportion of cases for which data are available. The turnaround time required for answering requests was available for only 62 percent of the cases handled through field agents and for less than half (46 percent) of those from non-target area requesters. Additionally, the position of the requester was not known for about two-fifths of the cases from non-target areas. More than half of the cases for which the data on turnaround time was not available on the request form were orders for packets. (Almost three-fourths of the packet orders for which data was available were serviced within two weeks.) At any rate, when cases for which there was inadequate data are excluded from the analysis, attempts to control simultaneously for the causal variables are hampered because there are so few cases in many categories.

However, as Table 8.7 indicates, certain conclusions can be drawn. Our main observation concerns the extent to which the information service became a packet ordering service, and -- especially -- the extent to which the field agents became "packet salesmen." This varied according to position, with field agents more likely to order packets for requesters in administrative and supervisory positions. Apparently, a good part of the field agents' activity vis-a-vis administrators and supervisors in State C -- at least during the period of the survey -- was devoted to acquainting them with lists of packeted information available from the regional center and then taking orders, or else simply furnishing these individuals with packets which the field agents felt might be useful.

A much lower percentage of requests from non-target areas represented packet orders. This was probably due to the efforts of one state department consultant who, in effect, became an unofficial field agent. Although she ordered many packets to keep as a resource in the media center which she directed, specific requests which she forwarded for other individuals were generally for individualized computer searches.

This points up one other matter: our data indicate only the percent of individuals who were packet requesters. The full extent to which packets

TABLE 8.7

STATE C: TURNAROUND TIME AND TYPE OF SERVICE ACCORDING TO POSITION OF REQUESTER AND METHOD OF REFERRAL

	Target area: Through Field Agent					Non-target Area
	Position					
	Teacher		Administrators, Specialists			
Turnaround Time	Elementary	Secondary	In-Building	District, County, IED	Total	Total*
within 2 weeks	31%	44%	48%	50%	42%	48%
from 2 to 3 weeks	46	36	9	25	31	26
more than 3 weeks	23	20	43	25	27	26
	100%	100%	100%	100%	100%	100%
	(26)	(25)	(21)	(16)	(88)	(57)
The % of cases which were packet orders	33%	31%	65%	58%	48%	20%
	(33)	(35)	(48)	(24)	(140)	(85)
Type of Search**						
Packet only	41%	42%	77%	63%	57%	26%
Computer only	29	33	10	17	22	56
Manual only	6	11	--	12	6	4
More than one	24	14	13	8	15	14
	100%	100%	100%	100%	100%	100%
	(34)	(36)	(48)	(24)	(142)	(85)

---

[*] Only the Total Column is presented for requests from non-target districts since position of the requester is not known in 33 of these cases; of the remainder, 21 requests are from SEA personnel. Thus, there are too few requests from school personnel in non-target areas for whom position is known (31) to allow comparisons with requests which came through the field agent.

[**] The usual order on Type of Search has been changed to allow for easier comparison with data at the top of the page and to highlight what seems to be the primary variation: differences in the percentage of cases handled by packets only and those handled by computer searches only.

were delivered is grossly under-represented since our data include only one request per individual. Many requesters in State C -- 22 percent of those included in our survey -- ordered multiple packets.

Packet orders were especially prevalent in the earlier period of the survey, which covered the months soon after packets had become available. Thus, the 48 percent of field agent requests which were orders for packets represented in part a concerted effort to make available to administrators and supervisors this new informational resource. There is some indication that a lower proportion of the requests in later months represented packet orders.

There were several justifications for the extensive use of packets. Certainly, wanting to take full advantage of a new resource was understandable. Also, State C was entirely dependent on the regional center service and field agents had been concerned about the long turnaround required for individualized searches. In addition, during the first year of operation, they had not been able to furnish clients with complete copy. All that clients received from a computerized search was a sheaf of abstracts. One of the three types of packets offered included complete copy of certain materials, and its popularity when it became available was undeniable. Even during the second year, field agents were handicapped by a shortage of micro-fiche readers and few of the schools in their districts had such equipment. Many requesters in non-target areas, however, were near one of the state universities where they could find a micro-fiche collection and readers.

The pitfalls of providing clients with a packet -- instead of working with individuals to clearly formulate a problem or question on which information was desired -- were graphically illustrated by the confusion of one client in State C. Comments scrawled across the pages of an otherwise blank questionnaire read as follows:

> The curriculum co-ordinator handed me this pile of papers one day and suggested there might be some interest in reading the materials through. I haven't read all of what was sent (like about two pounds of material). Some of the articles are interesting and the teachers are reading a few at a time...I'm terribly sorry this is not a more pointed view of this questionnaire, but I'm real fuzzy on what I'm supposed to have asked for. I can't recall one time anything like this (information service) was even brought to my attention.

The other distinctive features of State C's retrieval operations are accounted for in terms of their packet service: the large proportion of requests with no ascertainable purpose; quick delivery to clients; and the tendency to reserve computer and multi-searches for SEA staff. A curious feature which is less understandable is the lack of any relationship between specificity of topic and the provision of SEA assistance. This suggests two very different interpretations (1) a more random method of allocating technical assistance in State C than elsewhere; or (2) a more informal method of determining need for assistance than reflected in request forms (for example, by a telephone call from the field), which might have made assistance even better suited to clients' needs than in the other states where there was great reliance on the nature of the formal request. Our impression of the greater informality of State C's project would lead us to adopt the latter interpretation. In fact, it was largely this element of informality which accounted for the deficiencies of record keeping which have hampered our analytical efforts to deal with State C's retrieval operations. (For further discussion of clerical and managerial problems in State C, see Chapters 6 and 9, respectively.)

PART IV -- ORGANIZATIONAL ISSUES

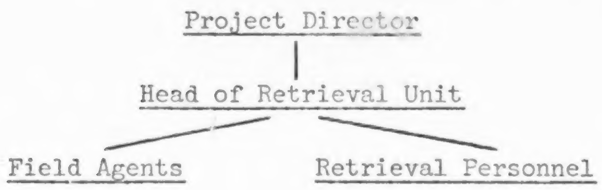
CHAPTER 9

ISSUES IN THE INTERNAL MANAGEMENT OF EXTENSION-RETRIEVAL PROJECTS

The authority structure of the three projects varied primarily in the degree to which the project director attempted to centralize the management of the project, and the degree to which intermediate managerial responsibilities were delegated. It should be pointed out that the structure of the projects was not imposed on the directors, but rather was designed by them (either in the proposal, or through decisions made during the initial phases of program operation) and therefore is to a great extent a reflection of their managerial styles. The three basic structures may be seen as delegated authority, a collaborative authority, and a centralized authority.

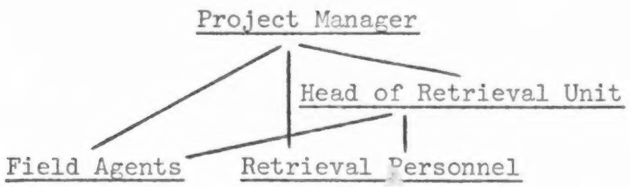
In State A, the project proposal provided a three-level hierarchy which was adhered to in practice. While the project director initially maintained control over many of the top level managerial responsibilities (in particular, those having to do with institutionalization of the project, long-range goal setting, and relations with other organizations, most of the day-to-day management was delegated to the head of the retrieval unit. The basic structure of the project may be seen in Diagram A:

DIAGRAM A
(Delegated Authority Structure)


Project Director
Head of Retrieval Unit
Field Agents
Retrieval Personnel

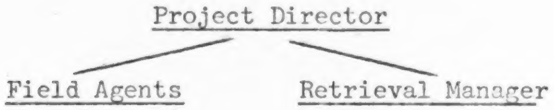
In State B, considerable managerial authority was also delegated to the higher ranking of the retrieval specialists, but the project director continued to be involved in most managerial decisions, and to exercise some direct authority over all levels of the staff. In a real sense, the head of the retrieval unit and the project director worked as a team, sharing in most of the decision-making processes. The basic structure of the project may be seen in Diagram B:

DIAGRAM B
(Collaborative Authority Structure)


Project Manager
Head of Retrieval Unit
Field Agents
Retrieval Personnel

In State C, the project director delegated little formal managerial authority to the rest of the staff, although he did encourage some autonomous decision making. The structure of this project may be seen in Diagram C:

DIAGRAM C
(Centralized Authority Structure)



There are certain potential problems inherent in each of these types of structure, although each also has its own advantages. The advantage of the delegated structure is that authority is placed in the hands of an individual who is very close to the workings of the project, who understands the needs of the staff and the constraints of work-flow, and who can make decisions quickly because of this knowledge. The potential problems in this type of structure are that the project director may lose touch with what is going on at lower levels in the project, and become almost totally dependent on relatively formal communications with the acting director. In a stable organization, this type of communication will usually be sufficient, but in a new organization (particularly an experimental program such as this one), lack of information may hinder the director in performing the other project-related roles which he continues to assume.[1] Furthermore, it is possible that the delegation of all responsibility for assessing and helping the field agents to the head of the retrieval unit may result in less attention being given to them than they need. It seems likely, for example, that a retrieval manager would place higher priority on dealing with retrieval matters than in dealing with problems arising in the field.

---

[1] This is not to state that this has happened in State A. We have, in fact, so little information about the management of the project in this state that we can draw few conclusions about how well it operated.

The collaborative structure has the advantage of not only keeping the project director in more immediate touch with the internal concerns of the project and its staff, but also in pooling the judgements of two individuals who are equally familiar with the project. This may lead to a greater potential for managerial flexibility--a desirable characteristic in an experimental project. It furthermore effectively doubles the managerial capabilities available to the project, which may be important in the beginning phases when there are many decisions to be made on the setting of goals, the design of work-flow procedures, and the development of techniques for supervision in the field. The drawbacks to such a structure will emerge only if no informal division of labor occurs between the two managers, since duplication of supervision may be costly once the project has become stabilized. The benefits of such a structure are also dependent on finding two managers with complementary, rather than overlapping skills and perceptions.[1]

The centralized administrative structure seems, theoretically, to be the weakest of the three, at least in the absence of a full-time project director.[2] The project directors of such programs normally do not expect to remain permanently in charge of internal project management since they are usually drawn from upper administrative levels within the state department of education. Thus, one may anticipate that the internal management of the project will eventually be moved to a lower level as the project becomes a more institutionalized service within the State Department. In the presence of a strong project director, the lack of delegation means that there is little likelihood that other personnel will develop the necessary overview of the project to be able to shift into a managerial position when the project director moves on to other matters.[1] When the project director is weak, or devotes little time to the project, poor coordination and development of the project may result. However, where a project director is permanent and full-time, such a structure may not be without advantages, since having one individual who is in complete touch with both internal and external matters may produce more consistent and stronger guidance of the project.

---

[1] In the case of State B, it should be noted that the project director hired the retrieval manager precisely because he felt that they had complementary skills in management.

[2] This problem will be discussed at greater length below.

Lawrence and Lorsch, in their study of three industries, indicate that the most effective authority structure for organizations in a stable environment is strong, centralized management. In an organization whose environment is changing, or relatively unstable, decentralization may be effective, because lower level participants may have access to information about changing conditions which may be useful in decision-making.[2] This observation is directly applicable to the pilot project situation, since the organizations involved were structurally designed to respond to cues from outside the organization in the form of a variety of requests and needs. Furthermore, since the pilot projects were new organizations the environmental response was unfamiliar to them, and to that extent the environment was unstable.

---

[1] It should be noted that in State A, the project director became less involved as the project began stabilizing; while in State B, the project director anticipated turning over the majority of managerial functions to the head of the retrieval staff if the project is expanded.

[2] Lawrence, Paul and Jay Lorsch, Organization and Environment, Cambridge, Massachusetts: Harvard Business School, 1967.

It should be noted that despite the categorization made above, that all of the pilot projects were relatively more decentralized than most organizations. The field agents and the retrieval staffs had considerable freedom in fulfilling the demands of their roles because of the essential lack of standardization in organizational technology. The retrieval personnel, for example, were not required to consult the retrieval manager or the project director as to how each request was to be filled, while the agents did not feel constrained to consult the central office as to how to handle each situation which they met in the field. Thus, the centralization-decentralization continuum discussed above is relative to this particular type of organization, rather than to organizations as a whole.

Another finding which is applicable to the situation of the pilot states may be found in Tannenbaum's study of the League of Women Voters, in which he concluded that the most effective authority structure was one in which there was a high degree of perceived authority, but a democratic distribution of authority. Both laissez faire organizations (low amount of total authority or control) and very centralized organizations (power concentrated in the president and the board) were less effective in achieving the League's goals. This finding has been replicated in other studies with different types of organizations.[1]

Problems of Project Management

The major problem for the project managers (as for the agents and the retrieval staffs) was the lack of a well-developed model of how such a program should be run and, accordingly, the role which the director should play. In one state, this problem was exacerbated by the fact that the project director had no part in writing the proposal, and was appointed to the managerial position only a few weeks before the project was to begin. Managerial uncertainty was increased in two states by the late funding of the program, which meant that the early weeks were largely taken up with desperate attempts to find staff after most educational personnel had already made their plans for the school year. In State B, for example, the manager of the retrieval center was not hired until September, and one of the agents was not hired until after the first training session.

The structure of the programs, that is, the location of agents in target areas that were some distance from the SEA, also produced some managerial dilemmas. While it is clearly necessary for a manager to have some contact with his staff, the distances, which were often huge, made frequent personal contact difficult, a phenomenon which will be referred to in the future as organizational dispersion. Even within the State Department staff, communication patterns were impeded in several cases by the fact that during certain periods in each project, the directors were located in different sections or even different buildings.

---

[1] Tannenbaum, Arnold, "Control and effectiveness in a voluntary organization", American Journal of Sociology, Vol. LXVII, No. 1, July 1961.

The project director must perform several functions relevant to internal management, all of which become more difficult under conditions of organizational dispersion. These functions include: keeping informed of staff member's activities; providing guidance and support to staff members; keeping them informed of his own activities and of the activities of other staff members; and integrating the staff into a team. These may be considered essential activities of a first-line manager insofar as poor performance in any of these areas will adversely affect morale and possibly efficiency of those working under him. They are functions which are particularly crucial in a new organization where routines, goals and a sense of direction are not provided by the history of the organization. In most organizations, the training and integration of new staff members can be largely carried out by lower level co-workers who have the experience and insider's knowledge to socialize the new recruit. In an organization where all are new, the entire burden must rest with the person who has the most intimate knowledge of the program.

Project Management in State A

We have very little information about the management of the project in State A as the evaluation team was not provided the access which it enjoyed in the other two states. External indications are, however, that the head of the retrieval unit, who was responsible for internal management, developed considerable skills in this area over the period of the pilot project. Only two problems have come to our attention:

1) Within the retrieval unit, management appeared to be somewhat overcentralized. All of the request forms which came into the office went through the acting project director's desk and received her signature. Also, she appeared to look over the materials before they left the office. Since the acting project director was extremely busy (and also assumed the management of tasks other than retrieval), this procedure may contribute to the longer turnaround time which is found in that state.[1] While it might be advisable for the retrieval manager to keep in touch with the types of requests coming in and the materials going out, it would probably suffice if she examined only a certain percentage of them now that the operations of the center are relatively stabilized.

2) While the acting project director made considerable efforts to integrate the project staff into a team by holding frequent staff meetings, sending retrieval personnel into the target areas, and involving the agents in many decision-making and planning functions, she initially gave very little instrumental guidance to the agents in the field. In the case of one agent, this lack of guidance was apparently not missed, since she found other resources to help her develop her role within the target district. In the case of the other agent, who was more isolated in the urban target area, the lack of central advice contributed to his insecurity. In a sense, he felt marginal both with respect to the target area and to the central office. The observer reported early in

---

[1] See Chapter 7.

the project, for example, that this agent was extremely impatient with all of the compliments which the retrieval staff were giving him.

> He keeps asking [the acting director] for more criticism. She says there's not much to criticize. At another level, he is saying, 'look a bit more closely at what's going on. There is a real problem of defining my role clearly and pinpointing my tasks.'

Project Management in States B and C

More instructive comparisons may be drawn between States B and C, where there is considerable information both about the project director's behavior and the staff's reaction to his leadership. Management and the authority structure will be discussed in the context of several issues which have appeared in the qualitative data.

Allocation of Time to the Project: The Project Director's "Other Hats"

None of the project directors were assigned to the Pilot Projects full-time. In State A this was of relatively little consequence, since most of the managerial duties were assigned to the acting project director, who was full-time. In States B and C, where the project director maintained control over at least some aspects of internal coordination, this was somewhat more of a problem. In the case of State B, the project director had also recently been appointed the head of a new division within the State Department. Furthermore, he made no bones about the fact that he disliked paperwork and office administration, remarking that he was an old field man and enjoyed being out in the schools. In the beginning of the project he indicated to the field observer that he hoped to spend almost full-time on the dissemination project. But realizing his own weaknesses in the areas of administration, he hired an individual for the position of head retrieval specialist who, he felt, was "strong on administration."

Despite his expressed desire to spend most of his time on the dissemination project, the director in State B found that his responsibilities for the rest of the division were quite time-consuming. A few months after assuming the job of project director, the second-level retrieval specialist indicated that his involvement was relatively low:

> Most of the mail goes [to the other retrieval person]. I think that the purpose of the weekly meetings between [the director] and us is to keep him posted about what's going on.

The director also admitted that he was spending little time on the project, with the exception of budgetary matters. He also indicated, however, that he was not worried about his lack of involvement since "[the head retrieval man] is taking the bull by the horns and everything is getting done that should get done. Whenever executive input is needed, I'm around."

Shortly thereafter, the project director became aware of the fact that both the U.S.O.E. and the evaluation team were concerned about the level of his involvement in the program. Furthermore, by this time a number of interesting new projects were emerging as a result of agent and retrieval activity, and so it appeared that the director's natural interest in school processes and innovation could be put to better use. Whatever the specific motivations, the director apparently began thinking more deeply about his role in the project and spending more time working with his staff. While most of the authority for day-to-day retrieval decisions was still in the hands of the retrieval specialist, the project director more often initiated general discussions about the project's functioning than before. Also, at this point his office was moved closer to that of the retrieval staff so that he was able to interact with them more frequently and informally.

While in State B the project director's "other hat" was the management of an SEA division which was strongly linked to the goals and functioning of the pilot project (the project director, in fact, often used staff from his other offices to help on the pilot project), in State C the director was apparently more involved with State Department tasks which were only marginally connected with the internal management of the pilot project.[1] The difference in the amount of time spent on internal *versus* external management may be seen in the variation in responses of the two directors to the "Project Director's Weekly Log" for the first 10 months of their projects. (See Table 1)

The Project Director in State C clearly spent much of his time not only on other matters, but also in places where he was unavailable to the project staff for consultation. Furthermore, he did not delegate administrative authority to anyone else in the State Department or in his own staff, nor did he make clear to the retrieval manager the limits of

---

[1] This director's involvement in external matters reflects his managerial style, which was most effective in demonstrating, lecturing and developing ideas about research and dissemination, rather than dealing with instrumental issues as to strategies of dissemination. In State B, on the other hand, the project director was most happy when he was working on instrumental matters. See the Summary of this section.

TABLE 1

WEEKS SPENT ON SELECTED INTERNAL-EXTERNAL ACTIVITIES BY TWO STATE PROJECT DIRECTORS (Number of Weeks in Which Time Was Spent on the Activity Over a Period of 39 Weeks)*

Item on the Project Director's Log	Project Director B	Project Director C
Traveling outside the state	2	13
Attending State Department meetings	5	29
Keeping informed of the activities of the retrieval staff	33	13

*From the Project Director's Weekly Log.

her authority.

The lack of delegation in State C went beyond matters of decision-making and planning. Some of the functions which were largely subsumed by the retrieval staff in the other states were carried out by the project director. In States A and B, for example, it was the responsibility of the retrieval staff to locate available State Department consultants when it appeared that on-site technical assistance would be advisable. In State C, by contrast, it was the project director who was primarily responsible for the formation of technical assistance teams in the first months of the program. Agents were also instructed not to make requests for consultant help directly, but to go through the project director since he wished to have the final say over which individuals would be sent out.

Lack of delegation in this area (in State C) had several negative consequences. Since requests for consultant help often tended to bypass the retrieval office entirely, the interaction between the retrieval office and SEA staff was apparently less than in the other states. The retrieval manager was not always well-informed about the status of technical assistance, since records of such requests were initially filed in the project director's office instead of the retrieval office. Furthermore, because of the project director's high degree of involvement in other SEA matters, he often did not have the time to follow-up on such requests adequately. In one case, for example, an agent made a request for technical assistance and, due to a foul-up in scheduling, the team never showed up. Eight months later, when the evaluation team made inquiries about what had happened after this situation, the project director had forgotten all about the request and was not even aware of the problem. In another case, where a large team of consultants had been sent to a meeting, the project director was asked for some feedback about their impressions of the visit a week later, but as it turned out he had not yet had time to get in touch with them. (It should be noted that as the retrieval manager has become more familiar with SEA staff members, she has found more opportunity to recommend site visits to them, or ask them for help in answering requests, so this problem is no longer as severe as it was during the first months.)

It might be stated, therefore, that there was an authority vacuum in State C during much of the project. The impact of this state of affairs on the functioning of the project will be seen in several of the issues discussed below.

Keeping Informed About the Project

Clearly one of the major prerequisites for effective project management is knowledge about what is actually going on in the project. Without adequate knowledge about the activities of personnel, the types of requests that are being made, the techniques being developed for handling of requests, and the problems that arise in these areas, it is impossible to make sound decisions that will help make the project more effective.

The project directors in States B and C differed tremendously in the degree of their involvement in retrieval matters. As noted previously, the project director in State B indicated that he spent part of his week keeping informed about retrieval activities more than twice as often as the project director in State C. Furthermore, the qualitative material indicates that the project director in State B spent more time with the retrieval staff, when he did meet to discuss retrieval activities, than did the director in State C. The greater amount of contact between the retrieval staff and the project director in State B reflects the higher priority which was given to retrieval in the state.

While the project director in State C appeared to feel that he had sufficient information about what the retrieval staff was doing, the retrieval manager was extremely discontented with the amount of contact. At one point, the single retrieval staff member noted that the director rarely discussed retrieval matters with her and seemed very uninterested in what she was doing.

The proximity of the project director to the retrieval staff makes it relatively easy to arrange weekly meetings or more informal types of contact. Assessing the activities of the field agents, however, poses a special problem because of the dispersed character of the project. The directors clearly need to know how the agents are operating, what types of requests they are handling, and what kinds of successes or problems they encounter in their districts, since this type of information may be crucial in determining the kinds of training the agents may need in the future, where consultant help might be most useful, what types of activities the agent should focus on, and so forth. In other words, a basic knowledge of the field is essential if the project director is to give the field operations any real guidance or support. Monitoring of the agents' activities would appear to be especially important in a project such as this one wherein the unique element is the agent. While the need for contact is great, however, maintaining sufficient contact over such distances pose some very real difficulties.

In State B, the responsibility for keeping in touch with the agents through personal contact was initially delegated to the retrieval staff because they had frequent telephone conversations about the agent's requests. Within the retrieval staff, the responsibility for contact was divided so that each of the retrieval staff members contacted one of the two agents. The project director reported early in the project that most of his personal contact with the agents involved larger issues, such as arrangements for the training program visits, keeping informed about major agent projects, etc. This technique for gathering information about agent activities appeared to be sufficient in the case of one agent who felt a strong need to inform the other project members about what he was doing. Because he enjoyed communication, he often initiated extensive telephone calls to the central staff. In the case of the other agent, however, obtaining adequate information was a continual problem. He disliked talking on the telephone and rarely volunteered any information about how his work was going. The lack of communication with this agent became so severe at one point that the project director was unaware that the agent was considering quitting his job owing to poor office conditions in the intermediate organization. The project director then suggested that the agent tape-record reports of his activities and send them to him. While the central office staff found that this method was extremely enlightening, it was difficult to sustain the agent's commitment to this type of reporting.[1] The retrieval staff also complained about the sketchiness of their contacts with this agent, since they found it difficult to locate him when they needed clarification of the agent's requests. The project director finally concluded that it would be necessary to hire a secretary for the agent so that someone would know where he was.

The problem in State B of relying on agent initiative to make contact and inform the central staff about their day-to-day activities was finally solved about six months after the beginning of the program with the development of a printed reporting form on which the agent was required to list all of his input activities (getting requests, making contact with new clients, explaining the program, etc.) and his output activities (delivering material, discussing it with clients, developing programs for implementation, etc.). Regular monthly meetings of the entire staff were also instituted six months after the program began. The agents were encouraged to discuss their present projects and plans for the future in these meetings. Finally, the director and the retrieval staff members began making more frequent visits to the target areas to meet with the agents and to talk with project clients. Both the agents and the central staff members felt that this procedure was an extremely useful means of keeping in touch. According to notes made at a staff meeting:

---

[1] The evaluation staff attempted to have all the agents make taped logs of their activities and also encountered considerable resistance to this type of activity.

> [The retrieval manager] felt that periodic contact was helpful to better understand the problems of field agent and school clients. [The agent] felt that [the retrieval manager's] presence added prestige to his services and helped to reinforce his role as a field agent. . . . He also felt that visits by the center personnel helped to reinforce his role as a field agent. . . . He also felt that visits by the center personnel helped to reinforce his role as a team member rather than an isolated field agent.

Overall, the project director in State B relied more on the routinized forms than he did on personal contact, although he received considerable secondhand information from the retrieval staff as a result of their telephone calls and visits with the agents. His reliance on field agent records is shown in Table 2.

TABLE 2

STATE B: FREQUENCY OF TWO DIFFERENT METHODS OF KEEPING INFORMED ABOUT AGENT ACTIVITIES

	Number of Times Activity Was Checked in 39-Weeks Period*
Keeping informed of the agent's activities by looking over records, timesheets, correspondence, etc.	24 weeks
Keeping informed of the agents activities through personal contact	17 weeks

*From Project Director's Log.

The project director in State C spent somewhat more time in the field during the first year than did the project director of State B, but his visits were often made as a member of a consultant team visiting a client rather than for the purpose of discussing and assessing overall agent problems and successes. This project director relied solely on personal contact in keeping informed about the agent's activities, as may be seen from the tabulations of the project director's weekly logs in Table 3.

Again, for the most part, he depended on agent initiative in contacting him rather than initiating contact himself. In two cases where the agents were somewhat reluctant to take an aggressive role in this area, the result was inadequate levels of communication from the agent's

TABLE 3

STATE C: FREQUENCY OF TWO DIFFERENT METHODS OF KEEPING INFORMED ABOUT AGENT ACTIVITIES

	Number of Times Activity Was Checked in 39-Weeks Period*
Keeping informed of the agent's activities by looking over records, timesheets, correspondence, etc.	0 weeks
Keeping informed of the agents activities through personal contact	29 weeks

*From Project Director's Log.

point of view. One agent reported that she felt that the project director thought that she wasn't doing anything, because there was no systematized reporting system, and she phoned him only when she wanted to have a state consultant come out. In another case, where the project director finally made a visit to a target area five months after the program started (as a result of the training team's advice) the agent indicated that the meeting was very social in nature, but did not get down to the substantive issues affecting the agent or the project. The retrieval manager made several visits to the field, but her own communication with the project director was so poor that it is doubtful that these visits were even discussed with him in detail.

Monthly project staff meetings were also begun in this state (C) about six months after the project's commencement, and in this case also served as a forum for discussing general issues related to agent activities. In sum, while the project director appeared to be quite well-informed about one of his field agents, and had reasonable knowledge of the major projects being conducted by the other two, his communication system was inadequate to provide him with timely assessments of all three agents' contacts with clients, and of their problems and needs.

In all organizations of this type, keeping informed of the activities of staff members who are not located in the central office may initially be a problem. While routine reporting forms may be sufficient once the program is stabilized and the agent' tterns of working are established and well-known among the project staff, there is a critical need to establish at the outset a method of acquiring in-depth information from the agents which does not rely solely on the agent's initiative. Failure to obtain comprehensive information about staff activities can, as we will see below, lead to other problems of providing guidance, coordination and effective service in the target areas.

Providing Instrumental Guidance, Assistance and Support to Staff Members

Another major function of the project manager is to help his project staff to develop operating procedures, deal with problems which arise in their work, set goals for their own work, and give them guidance as to how their work can best fit in with the overall goals of the program. Providing such instrumental assistance is an essential part of program coordination and direction.

In State B, the project director was very involved in the development of retrieval functions and worked closely with the retrieval staff in developing efficient procedures. In State C, however, the project director was only minimally involved in helping the retrieval manager to set up her office and develop retrieval procedures. The difference in the involvement of the two directors can be seen in their response to a composite of four items in the project director's log (Table 4).

TABLE 4

STATES B AND C: FREQUENCY OF PROJECT DIRECTOR INVOLVEMENT IN ASSISTING THE RETRIEVAL STAFF

	Number of Weeks Activity Was Checked in 39-Weeks Period	
	State B	State C
Index of director involvement in retrieval operations*	46	4

*The index included the following items from the director's weekly log: locating sources of information; working on an index system for information retrieval; communicating or negotiating with sources of information; and assisting the information retrieval staff. The score reflects the total number of times all of these items were checked over the same 39-weeks period.

In essence, the project director in State C allowed the retrieval unit to develop without any managerial guidance, although the person who was hired as the retrieval manager knew no more about computerized retrieval procedures than he did, and less about the potential sources of information outside of computerized retrieval. Furthermore, because of the lack of clear delegation of authority to the retrieval manager for the development of the retrieval unit, she felt initially hampered in using her own initiative.

The role of the retrieval manager in State C was, therefore, an extremely isolated one. Because she did not have much contact with the project director, and because there was no one else around in the SEA who was performing the same types of tasks that she was, it was extremely difficult for her to set up procedures to facilitate information retrieval in the state. At the beginning of the program, she reported that she was very insecure in her role, and felt at a loss about what to do:

> . . . I had to start completely from scratch--I didn't know anything about how to set up a retrieval center, except what I learned in the conference [at a regional resource center]. And [the project director] hasn't been here at all--just for a few days since I started work. . . . I feel afraid to do anything without asking someone, and [the project director] is never around. He comes in every so often and says, 'you're doing a great job,' but I don't know if he means it. . . . I'm afraid to order things that I need without asking someone for permission. The first week I was here I was trying to find out what journals and abstracts I might want, and I found one, but there wasn't a copy in the office that I could use easily. So I ordered it, and then when [the project director] came back, he told me that he had all the back issues. . . .

Seven months later, the retrieval manager still felt that she was getting little help from the project director.

One of the things that the retrieval manager was concerned about was her relationship to the consultants in the State Department. At a training session about seven months after the project's beginning, she raised the issue of whether she had the authority to go to State Department specialists for assistance in answering a request. The project director responded that it was important to go through the proper channels in making requests for specialists' assistance because they were overburdened already. The observer of this session noted that this comment did not really provide any clear-cut guidelines for the retrieval manager.

The retrieval manager developed a certain degree of resentment about the lack of help from the project director, as may be seen in the following remarks:

> When I put stuff on his desk, he just writes back 'great'--one time I gave him my only copy [of a newsletter], and he threw it in the wastebasket by mistake--I had to retype the whole thing. I know he's not reading them . . . he's just putting 'great' on them. . . . I get so tired of [the project director] saying that everything is good. Every time I take a problem to him he says everything's working out well . . . and I know everything's not good and I know I'm not really doing everything as well as I should, and I'd like some suggestions from him.

Toward the end of the observation period, the retrieval manager had appropriated another section head in the State Department to serve as a counselor and guide, and brought all of her problems to him rather than to the project director.

In State B the project director gave a considerable amount of help to the staff on both major and minor issues during the weekly retrieval meetings. The director, for example, was instrumental in developing contacts with regional labs and other information resources. He also spent a great deal of time helping the retrieval staff to set up working relations with the state computer system, and evinced considerable interest in the development of intra-state retrieval.

On a smaller scale, he frequently ran interference for the retrieval people in getting things done within the SEA (such as where to go to get a publicity brochure printed up quickly). While he only rarely dictated retrieval matters, he often made suggestions which helped the office to operate more efficiently. On one occasion, for example, when the topic of using specialists came up, he recommended that records be kept of when specialists were asked for help so that the retrieval center could follow-up on them and find out what had happened as a result of the request. Naturally, his familiarity with the retrieval aspects of the project made his guidance fairly practical and concrete.

Neither project director B nor C provided the field agents with strong guidance in the beginning months of the program, largely because they were just as uncertain as were the agents of their appropriate role. Thus, while they could subscribe to general statements about the goals of the field agents' activity, it was difficult for them to give their agents a list of guidelines. It was, nevertheless, clear in several cases that the agents wished to have more discussions about their role in dealing with clients, even if the discussions did not produce anything more concrete than an airing of the issues which concerned them.

The two states varied considerably in the degree to which they provided the agents with feedback or evaluations based on statistics. In State B, where the agents kept relatively detailed qualitative logs of their contacts, a few attempts were made to analyze them in order to determine overall patterns of agent activity.[1] On one occasion, the director of the retrieval unit tabulated the frequency of requests from all of the schools in the target districts, and discovered that the agents were concentrating heavily on a few schools. This information was fed back to the agents and discussed. State B also conducted a relatively detailed survey of users of the service, and in the analysis compared the target and non-target districts. The finding of this study were also discussed among the staff members. There does not appear, however, to have been any regular evaluative discussions based on this type of information. In State C, where the project director did not keep up with agent requests (and the retrieval manager was very reluctant to become involved in evaluating the agent's performance) no attempts at statistical evaluation were made.

---

[1] Part of the problem with using the logs for statistical analysis was that while space was provided for the agent to note the duration of the contact, and how many times he had seen the client with reference to that request, the agents usually neglected to fill out this information.

We would strongly suggest that record keeping and analysis should be an integral part of the self-evaluation of such projects. While the retrieval staffs were quite concerned about analyzing their own performance by their records, the response to the evaluation team's suggestion that the same be done for agents was more or less ignored. Yet, in order to keep in touch with agent activities, and to provide them with a more rigorous assessment of how well they are doing in certain areas, records of this type are essential. Specifically, we recommend that agents keep a slightly more extensive log than the type which was kept in State B (where the agents noted whom they visited and whether they got a request, delivered material, or simply discussed the status of a planned implementation) which includes noting how much time they spent with every person with whom they had contact. Keeping such a log, if it were simple, would require no more than a few minutes per day. The central staff could then keep a monthly report of agent activities, analyzing both the intensiveness (time spent per client) and extensiveness (number of clients reached) of agent performance in input and output interactions as well as the distribution of requests among different types of clients and different schools. It should be noted that such statistical analyses are not merely "evaluation by numbers," in that an agent may be perfectly justified in being highly intensive (seeing few clients for a long period of time) as opposed to extensive (getting many requests). However, it is essential for the project manager to know whether this is what the agent is doing, and to be able to use information gathered in such a way as to help the agent have insight into his activities.

About seven months after the commencement of the project, the evaluation team asked the agents to rank ten sources which might have influenced them in learning how to be a field agent. It is significant to note that in no case did the project director (in State A, the acting director) receive a rank of first place. Among the sources of influence which were top ranked by the agents were: trial and error in dealing with clients, advice from the retrieval staff, advice from the evaluation observers, and advice from other colleagues. Thus, individuals who were rated as most influential were those with whom the agents had more frequent or more sustained contacts than they had with the project director.

In State B, both of the agents ranked the influence of the project director in second place. This ranking reflected the increasing contact between director and agents as the program developed in that state. While initially one of the agents had been somewhat unhappy about the lack of direction from the central staff,[1] at this point he was beginning to feel that the interchange between them was very satisfactory. On the matter of goals, for example (an issue on which he had expressed a great deal of uncertainty earlier), he stated:

> The project director asked us to formulate goals. So I formulated them myself, and then the director reacted to them (and we discussed them).

In State C, the director did provide considerable guidance for one agent in developing tactics and in planning for the future. He spent quite a bit of time with him, for example, in working on a "needs assessment" to be done in the target area. Before the project even got started, he had discussed with the agent the use of diagnostic techniques to get at major problems within a school.[2] Later, at the beginning of the next school year, he helped him to develop a more systematic approach to the coordination of requests at the administrative level. The help given to the agent is reflected in the agent's ranking of the director's influence as second in a list of 10 possible influences.

The other two agents in State C, however, received almost no practical assistance from the director. This was partly a result of their own shyness in requesting help, and partly a result of the director's lack of perception about how his input would be helpful. While the agents were not outspoken about their unhappiness at this state of affairs, they did exhibit some resentment. For example, after the project director had finally made a visit to an agent whom he had not seen in the field for five months, the agent remarked:

---

[1] See also Part II, Chapter 2.

[2] It should be noted that this "help" probably did more harm than good, because the diagnostic technique (Force Field Diagnosis) was developed in the context of small group counseling, and was not meant to be used in the organizational context. The use of the technique produced some negative feedback from the agent's clients. See Field Agent Roles, Part I.

> [The project director] was trying to soothe his conscience about not visiting before. . . .

He also stated, somewhat sarcastically, that he had tried to give the project director some guidance as to how the managerial role could be better performed:

> I feel that [the project director] may have picked up a few ideas from here. . . . I would hope that when [he] returns to the state office, that he pushes a little harder--does a little inquiring into the reasons why we have not gotten our microfiche system and why the delay on journals and catalogues which are necessary [for our operation] as we discussed [several months ago].

This agent later expressed irritation over the fact that he had requested a list of state department consultants and their specialties from the project director several times, and had never received them. At one point, when he called the central office in order to ask him again, the director was away on other business. The retrieval manager offered to send the list out, and the agent responded that instead she should put a note on the director's desk reminding him, since it was his responsibility and he forgot. The other agent (who was hired as a replacement for another individual who left the project a few months after its start) stated that no one had especially helped her, and that she had received no real training from other staff members at all:

> [The agent that I replaced] went out with me for one day after I had already been at work for a while. That was all the help I got.

Both of these agents ranked the project director's influence very low (7) as a result of their perception that he had provided them with little guidance.

Part of the agents' negative evaluation of the project director in State C appears to have resulted not only from his failure to give practical guidance, but also from his advice as to how to approach the problem of disseminating research information when he did give advice. The project director placed great emphais on the diagnosis of basic problems in the school, rather than dealing with problems at the level perceived by the requester. The two agents, however, felt that diagnostic techniques would not facilitate, but rather hinder their work in the schools.[1] They also felt that the project director was judging their performance on the basis of how many requests they made for state department consultants to come out. One agent noted that he felt that it was overselling the program to push consultant assistance when they still did not have the capability of providing really relevant and useful information to help back it up. Thus, the underlying disagreement between the agents and the director tended to reduce the amount of influence which he had over them.

In State B, some conflict also emerged over the director's attempts to guide one of the agents, but for an entirely different reason. Here the agent (the same one who did not easily volunteer information about his activities) was unaccustomed to working under supervision since he had previously been a Superintendent, a college professor, and a researcher for the state legislature. Despite the fact that the project director gave a very free hand to the agents in developing their modus operandi, this agent tended to perceive suggestions as commands or attempts to gain too much control over his work. His desire for independence led him to make plans for relatively major projects without consulting the central staff, and this often caused friction between the director and the agent. About seven months after the program had started, for example, the agent made a trip to see the operations of an agent in another of the Pilot states without informing the project director. When the project director objected to his independent decision to make such a trip, the agent became quite annoyed. At a staff meeting where the subject was brought up, he indicated that he felt that the project director was "provincializing the agents" by not encouraging them to visit outside the state, and that the reason he had not asked for permission was that he knew that the director would refuse.

---

[1] See also, Part II, Chapter 2.

A similar conflict arose over the director's and retrieval manager's request that he keep more adequate logs about his activities so that they would know what he was doing. During the first summer of program operation, another incident flared up over this agent's decision to make a publicity film about the project, to be shown in the schools during the fall. Although he informed the director of these plans, he did not consult the director about budgetary matters related to it. The director assumed that he would make a videotape; but the agent decided to use film, which made the procedure considerably more expensive. At that point the director called the agent and requested that he make only two copies in order to reduce the expense. The agent again felt that the director was subverting his freedom of action, and argued that he would pay for the copies with his own funds. In a final incident, which occurred toward the end of the observation period, the agent began planning for a statewide workshop on the project. The director had already begun plans on his own for such a meeting and was upset about the fact that the agent might preempt the attention of his audience.

It seems that the basis of conflict in these situations was not really an underlying disagreement over project tactics, but over its authority structure. The agent, who was not used to being supervised, was unable to accommodate to even relatively minor suggestions by the project director. For the most part, the project director tried to avoid conflict by giving this individual only minimal direction, but he found it necessary for project coordination to make some demands on the agent. While the director tended to see the conflict as a function of the personality of the agent, this may pinpoint an inherent managerial problem in hiring agents who are extremely experienced and are themselves accustomed to being in supervisory positions.[1] The necessity of relying on infrequent meetings and written communications for keeping in touch with the agent seems, to some extent, to have heightened the problem. Because of the low level of communication, the director often discovered the agent's plans after they had begun to crystallize, and was therefore placed in a position of having to say "no" rather than giving constructive guidance which might have made the agent's plans more congruent with project goals and budget.

---

[1] It should be noted that this agent was much less satisfied overall with the field agent role. He felt that he was overqualified for it and that it was not terribly stimulating. (See also, Part II, Chapter 4.) His tremendous unhappiness with his office space and continuing lack of interest in discussing his work with the central staff probably reflected this personal dissatisfaction as much as it reflected the project director's managerial ability. Furthermore, he tended to give the project director conflicting cues as to how much contact he wanted with him. On one occasion when the project director visited him in the field, he reported that he was extremely pleased that he had come out. On the other hand, he often exhibited a strong disinclination to interact with other members of the team. For example, on one occasion he remarked that he (cont.)

As mentioned previously, it was difficult in the beginning of this project to give the agent's clear-cut guidelines for their role, but such input in future projects of this type might well help to avoid difficult situations. While the agents should have considerable freedom of action, since target areas may vary and require different tactics for gaining access and facilitating dissemination, they should be made aware from the beginning of the necessity of discussing their goals and plans with other staff members.

Overall, the project director in State B reported assisting the agents with their work somewhat less frequently than did the director in State C (see Table 5). Nevertheless, it should be noted that the weekly log in State B underestimates the amount of managerial guidance received by the agents, since the retrieval manager, who was in effect an acting co-director, did not fill out such a log. He had, if anything, more frequent contact with the agents on instrumental matters. Also, the

---

did not appreciate the director's efforts to make the staff "one big happy family." Thus, it was very difficult for the director to anticipate whether he should initiate interaction with this independent-minded agent or leave him alone.

project director in State C had three agents for whom he was responsible (as opposed to two in State B), and the markings do not reflect the skewed distribution of assistance among these agents.

TABLE 5

FREQUENCY OF ASSISTANCE TO FIELD
AGENTS OVER A 39-WEEK PERIOD
(From Project Director's Log)

Item on Project Director's Log	State B	State C
Assisting the field agent in solving problems which arise in their work	15	21

While it is clearly essential to provide instrumental guidance and assistance to the field agents, *affective support and encouragement* can also play an important part in helping to reduce the anxieties associated with entering a role where there are no established guidelines for measuring effectiveness. The agents have two important sources of such affective support: their clients and the central project staff. In the beginning of the program, before the agents had sufficient client contact to be able to rely on client appreciation of their efforts, the project director's inputs were very important to them.

In State C, two of the agents appeared to agree with the retrieval manager that merely being told they were doing a good job did not give them the true sense of doing well, because the statement was not backed up with any real indication that the director was *aware* of their work. Both agents indicated, in fact, that they were worried about whether the director actually *dis*approved of their performance in the field.

The project director seemed to provide more encouragement of the agents later in the project, particularly in project meetings where he would point out some of the things that each agent was soing that were worthwhile.[1]

In State B, one of the agents indicated on numerous occasions that he felt a tremendous sense of anxiety and isolation during his first months of work. The project director realized that the agent's strong need to talk to him represented a desire for approval, but felt that all he could do was to tell the agent that his work seemed satisfactory in every aspect. The agent agreed that the director was trying to give him support, and indicated that part of the problem was that "nobody else knows that I am going through now."

The reaction of these three agents indicates that there is an inherent dilemma for the dispersed organization in the area of supportive management. While many agents feel the need for approval from the director, what they really want is approval coupled with instrumental guidance. In the early months, when there is only a limited understanding of what is happening in the field, the project director is unable to provide this unless he spends a great deal of time in the field. This, however, would reduce the amount of time available for other essential managerial functions, such as helping the retrieval staff, gaining the collaboration of the State Department, etc. The only apparent solution to this dilemma is to not only delegate authority (which frees the director from some of these other functions) but also to appoint a full-time acting director who can travel to the target areas.

---

[1] The fact that the director informed the agents toward the end of the first year and a half that he intended to phase out the field agents during the continuation of the program can hardly have inspired the agents to place much condifence in his approval.

In summary, we may state that many of the problems associated with guidance and assistance of staff members are in turn associated with the amount of knowledge the director has of staff functions. The latter is causally related to the amount of time the director (or directors) spends on the project. It is also important to point out that providing sufficient initial guidance to the agents was a problem in all three states. It is also likely to remain a problem in future programs of this sort even if the role expectations of the agents are more clearly spelled out--unless steps are taken to deal with the problem of distance between the agents and the central office.

Keeping Staff Members Informed About the Work of the Project Director and Other Staff Members; Developing a Dissemination Team

In State B, communication from the project director to the retrieval staff was very frequent, largely because the director quickly assumed a style of joint decision-making between himself and the retrieval manager. During the first two months of the project, communication was somewhat erratic, but once the director became more heavily involved in the project, managerial decisions and developments were discussed at the weekly retrieval staff meetings. In State C the lower levels of communication between the project director and the retrieval manager were reflected in the latter's sense that she did not know what was going on outside of the area of retrieval. On two occasions early in the program she indicated to the observer that she was completely in the dark about the director's activities. (At one point, during a training session, she whispered to the observer that she knew that the director was sending the evaluation staff tapes of his activities, and she wished that she could listen to them so that she could find out what was going on in the project.) This situation appeared to improve somewhat over the course of the project but, was is consistent with the director's lack of delegation of authority to others on his staff, he rarely consulted her for opinions and inputs before making decisions.

In States B and C, the communication of information from the central office to the agents was initially inadequate for the same reasons that communication from the agent to the central staff was limited. The retrieval personnel had a fairly good idea of what the agents were doing, because they handled most of the agent's requests for information. The agents, however, were poorly informed about what was happening in the retrieval center and the project director's office. As we have pointed out, lack of understanding by the agent of the retrieval procedures and problems may lead to lower efficiency in the retrieval office.[1] While lack of knowledge of the project director's work may have no negative consequences in the short run, in the long run it is important that the staff should know the types of decisions that are being made with respect to the project, since this information might have to be taken into account in the performance of their own job.

---

[1] See Part II, Chapter 3.

The most important method of keeping staff members informed about each other's work is through periodic staff meetings where such issues can be discussed. The importance of such meetings may be seen in both states, where there was a consensus that every individual had a better sense of how his work was related to the project as a whole of the meetings. The gap that was filled by the project meetings was clearly realized by the project director in State B after the first of such meetings:

> I took a lot for granted, such as that everyone knows what everyone else is doing. In fact, our communications haven't worked that well.

In State B, the agent's desire to know more about the activities of other agents was also handled by several trips to visit one another. This occurred only once in State C, although the project director mentioned the possibility of inter-area visitations on several occasions.[1]

Despite the fact that staffs in State B and C were relatively well-informed about the project, the character of the staff meetings varied between the states. First of all, the State B staff meetings tended to result in much more "nitty gritty" discussions about problems that the staff were having, possible ways to solve the problems, and concrete planning for the future. In State C, on the other hand, the meetings generally involved more abstract issues of policy or role development, and at least part of the time was often devoted to outsiders (usually developers of educational innovations) who had been invited to speak.

---

[1] State A has made use of considerable visiting between staff members at all levels.

A second difference is that in State C the project director initiated almost all of the topics discussed. In many of the meetings, the other staff members did little more than respond to ideas as they were thrown out by him. In State B, while the project director and the head of the retrieval staff usually developed most of the agenda, the project director tended to open topics up for general discussion rather than directing the course of the meeting. Consequently, there was much more initiative on the part of the agents and the retrieval staff during the discussions. In essence, the meetings in State B had the character of brainstorming sessions, while those of State C were more formal.

A major consequence of the communication patterns in the two states may be seen in the degree to which the project exhibited a sense of being a team after the first year and a half. In the beginning, when the agents and the retrieval staffs were relatively isolated from one another, and communications between the project directors and other members had not yet become established, the concept of a "team enterprise" was fairly distant. By the end of the first year in State B there are many indications that the project staff members were completely at ease with one another (with the exception of the agent who was dissatisfied with his role and whom the director hoped to phase out). They felt that it was possible to interact freely at all levels, expressing their feelings and exchanging ideas with an eye to developing better project coordination. The project director expressed elation about 16 months after the project had begun at the ease with which all of the staff members had worked together in developing a training program for dissemination coordinators who had been appointed in non-target districts. He felt that the steps they had taken toward project unification (intrastaff visits and monthly staff meetings) had "paid off."

In State C at about the same time, the retrieval manager remarked that she particularly enjoyed being with the staff of State B (at the training team meeting) because of their overall enthusiasm and clear enjoyment of working with one another. At this point she clearly felt that this sense of joint effort was still lacking in her own state.

While the process of integrating staff members into a team appeared to be slower in State C than in State B, there are indications that it was taking place. The two agents in State C who had initially expressed some timidity in their dealings with the project director became much more willing to express their views and feelings as they became more confident in their jobs. The retrieval manager began to take more initiative in making visits to the agents in their target areas, and thereby became considerably more knowledgeable about the constraints and needs of clients in the field. The project director, at one point, also encouraged her to increase the number of trips to the target areas for the benefit of both the staff and herself. Unfortunately, however, the revelation that the field agent role would be discontinued after the third year of the program (according to the continuation proposal submitted by the project director) produced some consternation and anxiety among the agents, and clearly undermined the degree of personal commitment which they were willing to make.

In essence, we may conclude that team work and commitment to the project as a whole will not emerge naturally under conditions of organizational dispersion where contacts between staff members are sporadic. Developing a team approach to the project requires considerable effort on the part of the project director to keep all staff members well-informed about what is going on in the project, both in the retrieval unit and in the target areas. It appears also that the most fertile conditions for team effort to develop will occur when all project members are encouraged to add their insights to the development of project goals and procedures, and when there is considerable joint decision-making within the staff, at least on internal matters which will affect the functioning of the members.

Styles of Management

In the above section we have examined some of the problems and solutions to internal managerial issues in a project such as the Pilot State Dissemination Program. On the basis of this analysis, we will now try to characterize the project management of the three states as a whole.

Project management in State A appears to have been at once delegated and bureaucratized. While the agents were given freedom of action, the retrieval staff seemed to be dominated by a tremendous concern with routinization of the retrieval process, even during the first months of the program. A well-defined division of labor among the members of the retrieval staff was present in the retrieval unit, and this division of labor reflected a hierarchy among positions. Requests were processed according to a strict set of rules, again developed in the earliest stages of the project. These rules included such things as the approval of every request before it was submitted by the requester's superior, the approval of the form by the retrieval manager, and the intensive screening of every request and again final approval by the retrieval manager. Many of these patterns were developed before the program actually began operating; all were in effect within two months. The other states developed routines over the pilot period, but they tended to allow them to emerge naturally rather than to design them at the very outset. Because of our lack of information about State A, we cannot determine whether this bureaucratization had negative or positive consequences; but we feel that under most circumstances it is unwise to define routines so early in a "pilot" project since one of the ostensible purposes of a pilot project is to explore varieties of organization in order to determine which is best.[1] (We do have indications that the retrieval manager was able to operate with some flexibility even within a highly ordered system, since the routines of the office were changed at several points during the pilot period. This fact may be seen as an indication of her managerial skills, rather than an outcome of the organization.)

While the project director in State B seemed at the beginning of the project to have a relatively weak background in management and the least clearly developed set of ideas about organizing the project, over the course of the pilot period he developed considerable managerial skill. His managerial style could be characterized as at once cautious and flexible. We have already noted, in our examination of the goals of the project,[1] that this director perceived the attainment of his project's goals as more difficult than the other two directors. As a result, he tended to be much more self-critical, and spent more time than the others in assessing the overall effectiveness of the tactics and operations which were in use. Furthermore, he seemed to believe quite strongly that the project should allow its goals and procedures to change in response to increasing knowledge about how the project was functioning, both in the field and in the central office. Initially, this approach caused several individuals who were observing the project to think that the director was indecisive. We feel, however, that his caution and flexibility were of great advantage to the project, since they caused him to continually reexamine and try to improve the performance of all team members. This project director chose a pattern of participatory management involving all staff members in many major decision-making processes. By encouraging the retrieval director to take over many managerial functions, it will be quite easy for him to turn over more and more responsibility as the project becomes an established section within the SEA. Another characteristic of this director was his willingness to pitch in and help his staff work on their problems. While he tended to devote most of his attention to retrieval,[1] he was able, as field issues emerged more clearly, to provide the agents with some advice and assistance.

---

[1] It is possible that the high level of bureaucratization may not have contributed to efficiency (as it is widely presumed to do) since the turnaround time in State A was slower than in States B and C despite the fact that they had a larger staff.

---

[1] See Part I, Chapter 1.

The director of State C may be characterized by his attempts to provide expressive leadership to his staff, largely through reiterations of the worth of the project staff and the importance of their roles. Because of his isolation from most of his staff members, he appeared not to be aware of the actual difficulties which the team members were having, and his reassurances to them therefore seemed somewhat naive and overconfident. Furthermore, as the observer noted, "[The Director] does not seem overly ready to work at the nitty gritty level . . . ," and his actual constructive input into daily program operations was very limited. Since no one else was instructed to perform the managerial functions of guiding and directing the project, it was allowed to develop, at least internally, with little coordination or joint goal-setting.

Solutions and Recommendations

1. The Project Director's "Other Hats." We have shown that lack of involvement by the project director may severely undermine the managerial coordination of the program. The primary solution to this problem within the program has been to delegate authority to others on the staff who also have substantial knowledge about program functioning and who have the necessary managerial skills. Another possible solution in future

---

[1] This is hardly surprising since the proposal for State B focused heavily on dissemination hardware (use of internal television systems and state computer systems) and his own area of interest concerned educational technology.

programs might be to ensure a full-time managerial staff position. In fact, the RFP for this project required that the director be full-time. It also required, however, that the individual appointed as the project director be in a position of authority within the State Department. Since it is difficult to combine these two requirements (higher level administrators are unlikely to accept a full-time position as the director of a small pilot project), we would recommend that the future full-time managers be drawn from lower levels within the SEA or possibly be recruited from the outside. A part time project director could then be selected from a higher level within the SEA to serve as a consultant to the project and to help in goal setting and integration into the SEA.

2. Obtaining information about project procedures and day-to-day staff functioning. For a project director who has the time and the interest, obtaining information about retrieval staff functioning poses no difficulties. The major solutions to the problem of obtaining information about the agents were the construction of reporting forms, relatively frequent interpersonal contact over the telephone, and regular project staff meetings. Future project managers might also be well-advised to make frequent trips to the field in order to keep in touch with the agent's situation.

3. Giving assistance and guidance to staff members. While this proved to be the most difficult area in the pilot project, it should be less difficult for future projects since they will have the models developed during the first year and half to aid them. It is crucial that future project directors be sensitive to the types of problems which are likely to arise and techniques of solving them. We would also suggest that future directors might wish to conduct some on-site, intra-staff

training of their own to supplement or reinforce ideas generated during the training program itself.

4. Keeping staff members informed about the project. As the directors of the pilot projects discovered, it is essential to hold frequent staff meetings to discuss project issues and to keep all staff members up-to-date. Given the uncertainty surrounding a new program, it is probably advisable to hold such meetings more frequently during the *early* months of the program. Staff meetings of this type are especially useful in reducing the sense of isolation encountered by most of the agents when they began work.

CHAPTER 10

INTER-ORGANIZATIONAL RELATIONS

The primary purpose in the design of the pilot state dissemination project was to set up linkages between knowledge producing systems and potential users of knowledge. On the simplest level, then, the organizational environment of the projects could be diagrammed as follows:

RESOURCES OR ORGANIZATIONAL INPUT: Knowledge producing organizations and systems	→ PILOT PROJECT →	CONSUMERS OF PROJECT OUTPUT: Knowledge using organizations and systems

In fact, the environment of the pilot projects was considerably more complex, involving numerous organizations in regulatory as well as exchange relationships. The following is the "organization-set" of each state project:

RESOURCE ORGANIZATIONS	CONTROL ORGANIZATIONS	CONSUMER ORGANIZATIONS
U.S.O.E.	U.S.O.E.	SEA
SEA	SEA	Intermediate Organizations
Knowledge producing systems (BOCES, universities)	Evaluation Team	School systems
Training Team	Local districts (primarily states A + C)	
Evaluation Team		
Intermediate Organizations		
Local District staff		

It should be noted that the complexity of the projects' environment is increased by the fact that several organizations, such as the State Education Agencies, the Office of Education, and the evaluation team had *dual* functions and their *own linkages* with each other.

While the organization-sets of the pilot projects are small in terms of absolute number, they are extremely large relative to the size of the projects themselves. In most organizations relatively few individuals are in frequent contact with outside organizations or individuals, but because each of these projects consisted of only five to eight people, every individual connected with the organization was obliged to take on some *boundary spanning* functions. In general, the same division of labor in communicating with other organizations occurred within all three states:

Project Directors[1]	U.S.O.E. (regulatory and resource functions) SEA (regulatory functions) Evaluation
Retrieval Staff	SEA (resource and consumer functions) Knowledge suppliers Non-target client systems Evaluation Training Team
Field Agents	Intermediate Organizations (resource and consumer functions) Client systems Evaluation Training

Another factor which makes the linkage system (and the issues in developing linkages) quite different from that of most organizations is the fact that the project, and project members, are located inside organizations which are part of their role set (SEAs, IEDs and the target districts in State A.)

---

[1] In two of the states, a number of higher level managerial functions were delegated to the head of the retrieval unit. Thus, they tended to function in both capacities.

This factor facilitates the development of linkages, but also complicates matters because of the potential power of the host organization to influence the projects to a greater degree than if they were separate entities. In sum, a more realistic picture of the Pilot State projects would be along the lines of Figure 1.

Several factors must be considered in examining the development of linkages between the pilot states and other organizations.[1]

1) Litwak has pointed out that an important variable in determining the type of inter-organizational linkage that will be most productive is the degree of uniformity of the task which is to be coordinated. Where the task is uniform (standardized or unchanging) communication may take place according to written regulations outlining the nature of the coordination, the responsibilities of both parties to the joint task, and the necessary steps which are to be taken to meet the task requirements. In the case of non-uniform tasks, rules cannot be written because there are too many unusual or unique situations which cannot be easily handled.

Most of the inter-organizational linkages developed during the pilot project entailed essentially non-uniform tasks, such as calling up an SEA specialist to ask for help on a client's problem, contacting the U.S.O.E. to see whether a change in a budgetary item could be approved, or holding a meeting with a representative of a regional lab in order to see whether the lab's products would be suitable for use in the dissemination program. Because the core function of the program was to handle non-

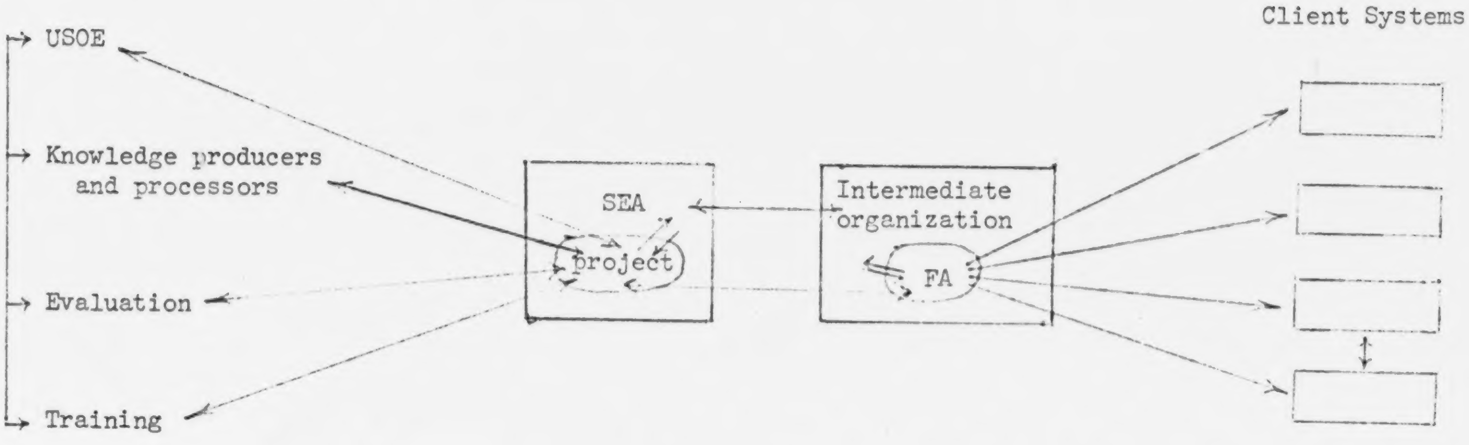
---

[1] Much of the discussion below has been influenced by Litwak's theory on inter-organizational linkages. See Litwak, Eugene and Jack Rothman, "Coordination between Formal Organizations" in Organizations and Clients edited by William Rosengren and Mark Lefton. Columbus, Ohio: Charles Merrill, 1970.

FIGURE 1

THE ORGANIZATION-SET OF THE PILOT

STATE PROJECTS


Client Systems
USOE
Knowledge producers and processors
Evaluation
Training
SEA
project
Intermediate organization
FA

routine requests from clients in the field, most of the linkages developed by the project also tended to be non-routine or ad hoc. (An exception to this rule was the linkages developed with the computerized data base.)

2) Another factor which tended to make most linkages non-routine in the beginning was that of organizational newness. In a new organization, many tasks will be non-uniform, since there is too little experience with the procedures to make their execution cut-and-dried. The factor of "newness" is even more powerful in relation to inter-organizational linkages, where all parties to the interchange are unsure of what is expected of them and what constitutes the limits of the relationship. Thus, to some extent all linkages will become more standardized as the organization matures and certain patterns of exchange become familiar to all parties.

3) A third factor affecting the development of linkages is that of mutual awareness of the need for cooperation or exchange. Until such mutual awareness exists, it is unlikely that interchange will be common. Although the staff members of the pilot projects were fully aware of the need for developing relationships with all of the agencies in their organization-set, because they were new they often had to go to some lengths to foster awareness in certain other parties. The problem of creating awareness in the schools and intermediate organizations has been discussed in Chapter 2, but applies also to the SEA and other educational resource organizations. In the case of these latter organizations, the project was required to publicize both their services and their need for assistance before any sustained linkages could be developed. Naturally, this process somewhat regards the development of linkages. In the case of the SEA, publicity for the purposes of gaining cooperation could be

carried out quite easily, because of the proximity and overlap in functions. Gaining the cooperation of organizations which were more distant, both in space and in function, proved to be more difficult and time-consuming.

4) A fourth factor affecting the types of linkages that developed was that the number of organizations which had to be drawn upon to complete any particular request were few. In most cases, filling a client's request simply involved contacting the computerized retrieval base, and possible a state department consultant or a library. While it is possible to conceive of a dissemination agency which attempted to coordinate the resources of several institutions and many clients in a joint problem-solving situation, for the most part these projects were not set up to do this.[1] Because the number of organizations to be coordinated in any given situation were few, most of the details could be handled by _ad hoc_ interpersonal meetings, rather than through semi-permanent coordinating bodies. This fact also contributed to the _informal_, _non-routine nature_ of most of the linkages.

5) A final factor affecting the nature of the linkages between the pilot project and the organizations within its set was the relative balance of power or symmetry of interdependence between them. Organizations in the economic sphere usually have a symmetrical exchange relationship with their input organizations (suppliers receive financial reimbursement in return for resource materials), and with their output organi-

---

[1] Some exceptions to this generalization may be found in agents' efforts to coordinate the problem-solving of _several_ schools. It seems that these efforts were, however, usually short range, and the agents did not develop a set of standard techniques for dealing with multiple-client situations.

zations (customers pay for products); but the exchange between the pilot projects and their major input and output partners was much more asymmetrical. Because the organization was new and unproven, and because its organizational and financial base were not secure, it had little authority within the SEA. Thus, it had to rely largely on good-will, professional interest or appreciation for services rendered to the SEA to obtain help from consultants. Clients also had a great deal of control over the project, although more indirectly. In both the short and long run, the projects were being evaluated internally on the basis of the number of satisfied clients they served. Thus, it was important for them to foster satisfaction among clients, even if this meant servicing requests that were not congruent with the overall goals of the program.[1] In summary, the pilot projects had little control over many of their important linkages, but rather were highly dependent on both their resources and their clients for survival.

Keeping these general points in mind, let us now examine the nature of the linkages which developed over the first year and a half of project operation.

Linkages with U.S.O.E.

Linkages with U.S.O.E., while relatively infrequent, were quite complex, partly because of the Office of Education's dual function as a resource and control organization, and partly because of inherent problems in relationships between large bureaucratic organizations and small, human relations organizations. The pilot projects were required to deal with pre-existing federal structures for purposes of reporting and funding. Such interchanges were highly standardized. Contacts with the project officer concerning special problems were largely interpersonal, however, entailing ad hoc responses to requests from the project managers.

---

[1] This problem was mentioned in Chapter 2, where it was indicated that a number of "illegitimate" requests (such as getting a library book for a teacher, or finding out which graduate schools had good programs in vocational education for someone who planned to apply) were serviced.

The nature of the linkages between the states and the U.S.O.E. were relatively problem free for two of the states, largely because the project managers had some experience in dealing with federal agencies, and also because U.S.O.E. was attempting to maintain a low-profile, non-interventionist posture. In the third state, however, the project director had some trouble in dealing with situations wherein he assumed that interpersonal linkages sufficed but in fact bureaucratic rules applied. This lack of understanding caused a considerable degree of irritation on both sides. The project director (who had inherited a weak proposal written by another party) was particularly annoyed at the difficulties that he encountered in trying to acquire approval for changes in the budget. As an illustration of his annoyance, at one point he described a situation where he wished to buy an extra copy of a set of materials on instructional objectives which had turned out to be very popular with requesters in his state. His contact at the U.S.O.E. agreed to this purchase over the phone and asked him to write up a statement supporting the change. Two weeks later the director was told that he would not be allowed to make the purchase and was obliged to cancel the order. The perceived lack of flexibility and support in Washington were very disconcerting to this director, since he felt that he should have the authority to respond to new situations and needs in the field. The director was also upset over the lack of informal feedback and leadership from U.S.O.E., since he felt that the individuals who were in charge of the project had considerable experience and knowledge which might contribute to managerial matters.

The above situation exemplified the problems which may evolve when a human-relations style manager of an informally operated organization is required to establish linkages with a highly rationalistic bureaucracy. Many of the problems which he encountered might have been avoided had there been some "training" for the project director in how to deal with budgetary and structural changes in the program, and if he had been more fully informed about the role of the U.S.O.E. and its representatives in the project. As it was, the two project directors who were more experienced in bureaucratic management were able to handle such situations with relative ease.

The program staff on the whole desired a relationship with U.S.O.E. wherein they could receive help and resources without any concomitant obligation to follow "suggestions." One of the project directors went so far as to assert:

> As far as I am concerned it doesn't matter how the U.S.O.E. sees the field agent. We wrote the proposal, and it was funded on this basis. The U.S. Office does not require me to do anything--they belong to us.

This imagery was reinforced by the U.S.O.E.'s project officer who tried to intervene as little as possible in order to minimize the Office's regulatory role. It was impossible to give complete autonomy to the states, however, even if such autonomy were regarded as desirable, because of regulations governing federal contracts. Also, the U.S.O.E. was highly desirous of success in the pilot state project, and therefore sought to intervene when it appeared that a project was seriously suffering in some respect. Thus, U.S.O.E. was unable to avoid the impression of a regulatory role, although it tried very hard to establish a collaborative one. All in all, the relationships with U.S.O.E. were highly ambiguous, mainly owing to sensitivities in the area of federal-state relations in general. The seriousness of such ambiguity cannot be overstressed, and may be quite costly in financial as well as programmatic terms. Especially when the U.S. Office is responsible for insuring access to projects for evaluation purposes, any hesitation in dealing with recalcitrant project administrators becomes an invitation to resist or sabotage the evaluation.

Linkages with the Evaluation Team

Relationships with the Evaluation Team also fall into the category of linkages which the states were required to maintain by virtue of federal funding. Here linkages were somewhat unusual since continuous collection and feed-back of field data required that intensive relationships be sustained over the entire period of the program. The evaluation team, like the U.S.O.E., had both facilitative and regulatory relationships with the projects. (The evaluation was designed to be formative in that observations and advice were to be fed-back to the three states during the period of program operation.) In addition, the evaluation team was expected to arrive at summative judgements about the program at the end of the funding period, which gave it considerable control over the program's future. This dual relationship proved to be a recurrent source of tension for both parties to the linkage. (For a discussion of our formative activities and the ways in which we tried to resolve typical problems, see Appendix J, "Formative Evaluation: An Exploration with Case Materials.")

While both the pilot project and the evaluation team were organized as small, human relations type structures, the distances between the two required that much of the communication be written and relatively formal. And although the evaluation team attempted to give its advice in non-judgemental terms, the project directors had a tendency to react to advice as if they were issued as imperatives. This problem was alleviated to some extent by the presence of on-the-spot field workers, whose relationship to the pilot project was more sustained, and clearly more interpersonal and informal. Advice or comments from these individuals were, in general, perceived as much less threatening than materials emerging from the distant evaluation team, and were also usually perceived by the project members as a positive resource. (The one exception was State A.)

The relationship with the evaluation was complicated by the fact that the states could turn to other consultants or advisors to determine how they might effectively overcome problems or improve their operations. Thus, the states were by no means wholly dependent on the evaluation component for help. The evaluation team, however, was totally dependent on the states for cooperation in the collection of field data. Although the states were formally required to allow the evaluation team to collect whatever data they desired, in practice there were numerous ways in which they could sabotage the process either covertly or overtly. Because of the U.S.O.E.'s non-interventionist stance vis-à-vis the states, the evaluation team was helpless in enforcing cooperation. Thus, the character of the linkages varied from state to state, depending on the project director's ability to understand and willingness to accept the dual role of the team. In the state where the sanctioning power of the evaluation was perceived as paramount, the linkage was limited almost entirely to formal, standardized interchanges. In the two other states there was considerably greater willingness to establish more informal, non-standardized communication patterns, particularly through local field observers. In summary, one means by which an organization may limit its linkage with another organization which it perceives as a threat is to formalize or standardize the communication procedures, which allows for "screening" of all exchanges.

Linkages with the Training Team

The linkages which were developed between the pilot states and the training team were relatively informal and infrequent. The training program consisted of site-visits to each state at several points during the first year and a half, one on-site training session in each state, and two centralized training sessions. Between the training meetings, project staff members occasionally contacted the training team for additional assistance.

Structurally, this linkage was a relatively simple and non-problemmatic one, since both parties to the relationship perceived it to be non-competitive and facilitative. Certain strains, however, arose over the course of the project because the states were somewhat disappointed with the quality of resources available to them through training. Chapter 10 contains our evaluation of the training program. Relations with each of the three states are discussed there.

Linkages with the State Education Agency (SEA)

Relations with the State Departments of Education in which the projects were located were at once the most complex and the most significant to the organization. We noted in the beginning of this chapter that the State Departments developed three types of linkages with the pilot projects: a resource linkage, a control linkage and a client/user linkage. Of these three, only the resource linkage was well defined in the RFP which was submitted to the states. There it was stated that proposals would be considered on the basis of the personnel resources (consultants), the information resources (collections of exemplary practices, ERIC collections, fiche collections and some hardware) and indications of present and future financial resources available for institutionalizing the project.

In essence, the SEAs had considerable power over the date of the fledgling dissemination projects, and given this power it was necessary for the projects to demonstrate their value to the SEA to be assured of continued support. A major means of establishing the importance of a project within the SEA was to make it visible by provision of services to SEA staff members, thereby hopefully showing that the project could aid the SEA in attaining its own goals. Thus, the control and the client linkages were inextricably related. Clearly this situation introduces the possibility of cooptation. Indeed, one of our fears at the beginning of the program was that the pilot states would move toward placing higher priority on the requests or needs of SEA personnel and accordingly neglect local schools who were intended to be the primary recipients of the service. (One of the states, as a matter of fact, listed its priorities later on as follows: SEA staff, target areas and then non-target areas.) We wondered whether sheer proximity together with the process of being incorporated into the SEA would undermine organizational identity. In fact, however, the pilot projects were able to balance their needs for incorporation and for resources without falling into this position, although they did vary in the amount of services they provided to the SEAs.

Another problem that was initially anticipated but which did not occur to any noticeable extent was friction between the pilot project and the state consultants and specialists. Given that the pilot project was intended to perform a function similar to that of consultants and specialists (i.e., provision of information and assistance to schools in the state), it seemed possible that some consultants or departments would feel that the presence of such an office within the SEA would subvert their own status and usefulness. Furthermore, the pilot project was expected to make demands on the time of specialists and consultants by requesting them to aid clients. This situation also seemed to provide a potential for conflict. One reason for lack of conflict may have been that during the early phases of the program, the pilot projects did not call upon consultants often enough to make their requests for time burdensome; while they did provide them with services which facilitated their work. If the project had called upon consultant/specialist help as frequently as they initially anticipated, there may have been more of a problem in this regard.

Special features of the linkages developed within each state will be discussed below.

State A. From the beginning of the program, State A's project appeared to be best integrated with the SEA. Their original proposal focused heavily on the ways in which the project's resources could help the SEA to achieve its goal of "management by objectives" for the entire state. The project was officially a division of the Office of Research and Planning which was managed by the project director. Such a location may be seen as an ideal "home" for a project such as this one, since it provides a strong identification with the provision of "research" data which the program was supposed to perform. SEA responsibility for guidance or monitoring of the project was not limited to the project director, however. An advisory board, composed of top level administrators throughout the SEA, was appointed. The regular meetings of this board provided opportunities to express the worth of the program, and to get others in the SEA involved in its success.[1]

The program was well publicized among SEA personnel during the early months of the program. In fact, the majority of requests for searches in the early months came from SEA personnel (55%). Furthermore, over the first year, 13 out of 18 sections within the SEA used the service at least once, the only non-users being administrative (Finance and Personnel) and auxiliary offices (textbooks, transportation and data processing). In addition, the origin of the requests suggests that the service was being heavily used by both top level administrators and consultants. In toto, over the first year and a half of program operations, 239 requests were received from SEA personnel. The rapidity and the size of the SEA response to the opening of this new service indicates that a real need was being met within the State Department of Education.

---

[1] One of the reasons the advisory board was created was to ease potential tension and competition between different divisions within the SEA. By involving the heads of two major divisions in the planning and evaluation of the retrieval unit, the possibility that they would construe success of the program as "empire building" by the project director was avoided.

Perhaps a more important indication of the institutionalization of the service within the department, however, was the demand from top level administrators for position papers and in-depth analyses prepared by the retrieval staff. In particular, the manager of the retrieval unit helped the state's eleven Task Force Committees (one for each of the eleven state objectives) to acquire information on promising practices and research to aid them in planning. In addition, she participated in many of their meetings.

Given that the goals of the State A project placed higher priority on requests from the SEA, and the fact that they planned to spend a considerable amount of time preparing papers for these state personnel, it was here that we were most concerned about possible cooptation. Rather than neglecting the target areas as the number of requests increased, however, the project hired additional personnel, including a technical writer to help prepare special reports. In fact, school clients more often received comprehensive service (manual and computer searches) than did SEA personnel (see Chapter 7). Further, the staff worked very hard to extend the service to non-target educators, and launched publicity campaigns in these other areas sooner than did the other two states. In short, although the project was apparently quickly institutionalized in the SEA, this occurred without goal displacement.

State A also exhibited a good balance between the resources which it acquired from the SEA and the resources which it rendered to SEA clients. During the five month period covered by our survey of clients, 22 individuals in the SEA submitted requests to the retrieval unit. This represented 8 percent of all requests for the period. Among school personnel, 12 percent in the target area and 24 percent in the non-target area received SEA assistance. Since the initial proposal from State A did not emphasize the availability of SEA assistance, and the director was "undecided" about the priority of this goal even a year later (see Chapter 1), the development of a fairly active use of consultant help again indicates the extent to which the project had become institutionalized.

Final evidence of institutionalization within the SEA is provided by a brief questionnaire sent to the project directors about a year and a half after the program had begun. The following contributions to the project on the part of the SEA (expressed as a proportion of total project resources) were indicated by the director:

	Fiscal 70-71	Fiscal 71-72
Personnel (fte)	5%	15%
Facilities	10%	15%
Other (financial)	5%	10%

According to these figures, the proportionate contribution of the SEA increased from one year to the next. Further, when asked what percentage of the project's budget would be absorbed by the SEA when the pilot project period is ended (i.e., redrawal of U.S.O.E. funding), the director indicated 40 percent. Another 20 percent was to be absorbed by local educational agencies. Presumably, additional funds would be sought from other sources. In a follow-up question, he noted that a firm commitment to these percentages had been expressed by the appropriate LEA and SEA officials. Finally, in response to an open-end question, he remarked:

> In our state, the project is operated as a formal, accepted function of the SEA and is administered through regular Department channels.

On the whole, then, it appears that the pilot project in State A has been highly accepted by the SEA.

State B. In State B the project was instituted primarily to fulfill the overarching state goals of "closing the communication gap" between educational knowledge and the local schools. Little emphasis, therefore, was placed on servicing the requests of SEA specialists. Consequently, publicity efforts within the SEA were fairly minimal during the early months of the program. In the first 27 weeks of the project, the director indicated on only three of his weekly activity logs that he had spent time informing SEA personnel about the program. Other members of the retrieval staff also helped to publicize the program within the SEA, however. And about a year and a half after the project had begun, 97 percent of the SEA respondents to our "publicity" questionnaire indicated that they knew of the service. However, lesser interest in or need for the service within the SEA is reflected in the number of requests during the first year and a half of operation (166 in State B as compared with 239 in State A, although SEA staff size was roughly the same).

It seems that structural collaboration was less well developed here than in the other two states, and that middle management was allowed to operate with only occasional contact either with superiors or other departments. Because the project director in State B was at a lower administrative level than the project directors in the other two states (he reported to an Associate Superintendent rather than to the Deputy Superintendent as in State A), he spent far less time at SEA meetings and in reporting to a superior than in State C, according to the weekly logs. Table 10.1 shows the number of weeks which the project directors in States B and C mentioned attending SEA meetings, reporting to a superior, and informing SEA staff about the project in a 39 week period. (The State A project director supplied us with logs for only about three weeks.) Clearly, the State C director was far more *administratively* integrated into the SEA, although he did not spend any more time *informing* SEA staff in general about the project.

TABLE 10.1

FREQUENCY OF PROJECT DIRECTORS' INTERACTIONS WITH
OTHER SEA STAFF OVER A 39-WEEK PERIOD
(From Project Director's Log)

Item on Project Director's Log	State B	State C
Attending meeting in the State Education Agency	4	29
Reporting to a superior in the State Education Agency	5	25
Informing SEA personnel about the program	10	9

On the other hand, the project in State B seems to have made extensive use of internal resources, and appeared to have little difficulty in getting extensive commitment from SEA personnel. One of the resources available to the project was staff time from other sections. For example, the project director encouraged the manager of the professional library to become more deeply involved in intra-SEA dissemination by screening articles and films which come across her desk and then giving information about them to the specialists. The librarian also worked in close collaboration with the retrieval staff by bringing their attention to new information and keeping up to date on the nature of requests so that she could supplement them when she came across anything relevant.[1] Other SEA staff members who were also under the management of the project director contributed considerable time by helping to set up files of individuals who would be interested in receiving material on specified topics without having to make requests.

State B also made moderately extensive use of specialists in answering requests (15 percent of the target area clients in our survey mentioned SEA assistance, as did 27 percent of the non-target clients). This occurred despite the fact that the director was initially worried that they would be too busy and might be annoyed by demands on their time made by the pilot project. In March, 1971, one of the retrieval specialists noted that:

> I get in touch with the [SEA] specialists, I would say, in 80% of the cases that cross my desk . . . usually [just] to get some help in answering the requests.

The responsiveness of the consultants and specialists to the needs of the users of the retrieval service was something of a surprise to the project director. Although he had not envisioned any insurmountable problems in gaining their cooperation, he had not expected such heavy use of their services. As his retrieval specialists pointed out:

> . . . Some consultants see the dissemination program as an aid in pinpointing schools which they should visit. Some specialists jump at the chance to go out to the schools, feeling this to be the most enjoyable aspect of their job.
>
> . . . the goal in the original proposal of closing the gap between the [SEA] and the local districts can be documented as accom-

---

[1] State A received similar services from the State Library.

> plished. This has been done by using the specialists. . . . most of the specialists will drop what they are doing at the call of the local districts for help. . . .

During the period covered by the survey of users, 63 requests received at least some consultant help--nearly as many as the other two states combined.

In response to our recent questionnaire on institutionalization of the project within the SEA, State B's director noted the following proportions of project resources supplied by the SEA:

	Fiscal 70-71	Fiscal 71-72
Personnel (fte)	33%	33%
Facilities	28%	28%
Other (financial)	20%	25%

While the proportionate contribution to the project did not increase over time, clearly a larger proportion of the project's resources were contributed by the SEA than in State A. It should be remarked, however, that State B is generally more affluent, and that educational expenditures per pupil are considerably higher than in State A. Thus, the SEA contribution to State B's project might represent about the same level of financial effort as the contribution to State A's project. When asked what percentage of the project's budget would be absorbed by the SEA when the pilot project period was ended, the director indicated 70 percent, with the additional 30 percent being furnished by local educational agencies.

---

[1] The percentage of requests receiving consultant help were quite similar because of the larger case load in State B. However, the absolute figures give a better indication of the amount of time commitment from the SEA during the period covered because of similar size of the SEAs.

Verbal commitment to these contributions has been received from the appropriate officials.

Finally, when asked about formal communication mechanisms within the SEA, the director replied:

> There is direct linear communication to the Associate Superintendent, Deputy Superintendent, and the Superintendent. There is also direct lateral communication with other divisions, specifically with Executive Services and Planning and Evaluation.

These data reflect a highly successful level of institutionalization within State B's department of education.

State C. The State C proposal listed the following objectives with respect to obtaining SEA consultant help:

> . . . [The] project will influence staff role perceptions so as to include at least 10% of each staff member's time as a technical assistance team member.
>
> . . . Five staff members of the [SEA] who have received technical assistance training at random will successfully and typically differentiate their role as a technical assistance team member and their role as a specialist when asked for a written description of their jobs.
>
> . . . Five staff members of the [SEA] who have received technical assistance training selected at random will voluntarily enumerate at least two benefits to local districts accruing from their activity as a technical assistance team member when interviewed concerning that part of their job responsibility.

Despite the strong emphasis on obtaining consultant help from the State Department, developing cooperation proved to be more difficult than was anticipated. After the program had been in operation for eight months, the project director stated:

> There needs to be a much greater tie with other divisions of the SEA. We are still looked upon as a project that's off to the side. Somehow for this to really work, this has to be just part and parcel of the state agency operation. . . .

Another staff member from the same state commented that until the training team had emphasized the need to hold meetings with SEA consultants, it had been difficult to arrange them:

> The training session really helped us get more coordinated with the SEA. We'd asked for meetings with the SEA from the beginning of the project, but had never gotten them.

As noted earlier (Chapter 9, "Issues in Internal Management"), part of the problem here may have stemmed from the overemphasis placed on technical assistance. Rather than regarding the state department consultants as one more resource available to the retrieval manager to help in filling requests, technical assistance was anticipated as a major problem-solving effort wherein at least two and possibly more consultants would go out to a district at the same time, hopefully to deal with major curriculum or organizational issues. Naturally, it is more difficult to schedule and coordinate such a major effort than it is to send out a single consultant at his convenience, and this emphasis may have disparaged requests for consultants on more minor issues.

Another problem in institutionalizing this project was its lack of identity within the SEA. The project director and the retrieval manager were not even members of the same division. Retrieval was located in the Media Division while the Director remained in the Research and Innovation division. Thus, although the observer reported that it was obvious that individuals within the state department were committed to the project, it did not seem to have a secure and highly visible organizational base.

Nor does it appear that the pilot project was readily coordinated with other efforts within the SEA which complemented those of the retrieval staff. Thus, the project director reported after about a year of operations:

> We really have five people working on retrieval in this office, but they are working in different places. And if, in some way, we could pull all of those services under one roof . . . into a retrieval center, we would have an even greater service. And this is one of our goals.

SEA personnel were heavier users of the retrieval service than in the other states. During the period of our survey, 27 percent of the SEA personnel in State C were clients of the service, compared with 15 percent in each of the other two states.

Despite the problems in coordinating the service with SEA assistance in the first several months of the project, by the time of our survey (about a year after the beginning of the project) a larger proportion of target area clients in State C reported SEA assistance than in either of the other two states (State A, 12 percent; State B, 17 percent; and State C, 21 percent). Further, by the criterion of financial commitment, this project seems to have been well integrated. In the second year of operations, a fourth field agent was added at state expense. Even earlier, the state had granted the project additional funds to purchase extra retrieval capabilities and services.[1]

It might be worthwhile to summarize our statistical observations on SEA linkages. Comparative statistics showing the proportion of all clients represented by SEA requesters, proportion of SEA staff making requests, and frequency of SEA assistance to target and non-target clients during the five-month period of our survey are shown in Table 10.2. Information supplied by the project directors in States A and B regarding past and future

---

[1] Owing to the absence of the project director at the time that we distributed our questionnaire on institutionalization of the project, we cannot present the same statistics for State C as already presented for States A and B.

TABLE 10.2

STATISTICS REGARDING INTEGRATION OF PILOT PROJECTS INTO THEIR RESPECTIVE SEA'S

	State A	State B	State C
1. SEA clients as % of all clients in five months*	8%	5%	12%
Total clients:	(273)	(427)	(218)
No data:	(6)	(2)	(33)
2. SEA clients as % of SEA personnel in five months	15%	15%	27%
Total SEA staff:**	(150)	(140)	(95)
3. % of target and non-target clients who received SEA assistance in connection with the information service in five months:***			
Target area clients	12%	17%	21%
Total target clients:	(59)	(129)	(109)
No data:	(11)	(29)	(7)
Non-target area clients:			
Total non-target clients:	(65)	(126)	(23)
No data:	(10)	(15)	(3)
4. Estimated proportion of total project resources contributed by SEA:****			
1970-71 (fiscal)			
Personnel (fte)	5%	33%	(Not Available)
Facilities	10%	28%	
Other financial	5%	20%	
1971-72			
Personnel (fte)	15%	33%	(Not Available)
Facilities	15%	28%	
Other financial	10%	25%	
5. Estimated proportion of budget to be absorbed in future by:			
SEA	40%	70%	(Not Available)
LEAs	20%	30%	

* From request forms.

** Based on count of names in SEA directories.

*** Based on client questionnaires; excludes SEA and college or university clients.

**** Based on questionnaire for project directors.

commitment of SEA resources to the pilot projects are also provided.

According to these data, State C was most successful in generating requests from SEA staff and in having SEA staff render assistance to target area clients. State A, however, did not envision the latter as an important goal. (The three states were equally active in providing assistance for non-target area clients.) Unfortunately, we are unable to report the level of resource commitment by the SEA in State C. State B was more successful than State A in obtaining resources as a proportion of total project personnel, facilities and other budget items. This latter difference, however, is probably due to greater SEA affluence in State B.

On the whole, it would appear that the pilot projects were well received by their respective state education agencies, at least by the time of our survey. Institutionalization in terms of use of the service and resource commitment was successfully achieved.

Developing Linkages with Resource Agencies

The Request for Proposal (RFP) for the Pilot Program hinted that the funded states would be expected to make some effort to contact and acquire the services of educational resources outside of the SEA's, but did not emphasize this facet of program development. Instead, the RFP focussed on the acquisition of ERIC materials, PREP, and other "hard-copy" information about educational programs. Arrangements for acquiring these resources were developed internally (within the State Department) in the case of State A, and contracted for with a regional resource center in the case of States B and C. Issues in the development of adequate retrieval-linkage capacities have been discussed in Chapter 6.

One of the reasons that the U.S.O.E. did not emphasize linkages with universities was that they were concerned with the dissemination of "validated information" rather than with new or untested ideas which were still in the developmental stage. They reasoned that university personnel willing to donate their time to the project would seek to use project clientele to help them test new ideas which were in the process of development. Since there appeared to be a sufficient number of programs whose worth had already been demonstrated, it was not deemed necessary to engage in new experiments under the aegis of the Pilot Dissemination Program as a major effort. Thus, the program was not designed to disseminate the very "newest" ideas or products, but rather sound ideas which had not yet become common practice within the schools. It was anticipated that the pilot projects would limit their contacts with universities and other knowledge producing organizations to the use of consultants.

Because of this emphasis on putting "tested" ideas into practice, and because of the difficulties entailed in getting university consultants to donate free time to the projects, sustained linkages with universities were relatively minimal during the first year and a half. (As mentioned in Chapter 5, only about 5 percent of the clients had contact with higher education personnel during the five month period of our survey.) State A did use the microfiche collections at a university in one of the target areas, and through the efforts of the agent involved several staff members and students in the development of a Learning Resource Center in her district.

State B sent a brief questionnaire to a large number of institutions to locate available consultants -- to the departments of education at their state universities, to their state community college network, to R & D centers and labs, and to other associations. The questionnaire had an excellent return rate, and from the responses a seven-page list of possible consultants was compiled. This list was made available to the field agents but was not generally distributed to school personnel in other districts because the retrieval staff and project director were not personally familiar with all the individuals who had indicated a willingness to consult. They could not validate the fact that all names on the list actually were experts in the fields which supposedly were their specialties or that they would be useful to requesters. The field agents, rather than using the list themselves, tended to turn to the retrieval center when they wanted a consultant.

At a staff meeting at the beginning of the second year, the retrieval director reported that the new project had achieved very good relations with the SEA consultants, but had not been successful in arranging for the use of consultants from outside the SEA, especially from colleges and universities. One way in which this objective might be facilitated, he felt, was through the personal acquaintance of the field agents with faculty members at institutions of higher education in their own target districts, and accordingly urged his state's field agents to attempt this.

The retrieval director in State C also compiled a list of non-SEA consultant resources through letters sent to approximately 25 institutions and organizations in the state. These letters resulted in a list of about 50 individuals; but again, few were known personally by her. She added new names to the list as she found individuals who were useful as sources of information in answering particular requests which were being researched. Thus, she occasionally used individuals or organizations on the list herself in gathering information to answer requests, especially for fairly technical information or non-educational questions (such as tax information, various statistical questions or materials from business research organizations). But the project itself rarely used university consultants in the field (only 6 percent of the clients had such contacts during our five month survey, and many of these were probably with our own field observers). Partly as a result of observer-field agent relationships, several cooperative programs developed between a local university's department of education and schools in the agent's area.[1]

Thus, in these initial years, the use of university consultants was not routinized through a relationship between the state information office and the faculties of the institutions of higher education in the state. When it occurred, it resulted from the direct relationship and familiarity of the field agent with faculty members at some university. In retrospect, this is not surprising. The best plan of action for putting university experts and school personnel in touch with each other might be through arranging entree for the field agent into nearby institutions, or deliberately appointing a professorial advisor for the agent at such an institution primarily to aid him in gaining familiarity with faculty members and resources at the university. (This point is also stressed in Chapter 5.) In this respect, the extension service was in very marked contrast to the agricultural extension system where direct contact with universities is built into the system.

At the end of the first year of operations, the project director in State B was attempting to set up a cooperative effort for dissemination with the ERIC center at a State University which had specialized files on school management. The director of this particular center had volunteered to serve as liaison between project and University staff members in contacting resource people and consultants, in return for having clients with such problems referred to his center. University contacts in State C developed largely as a result of the interventions of our two observers. Since these observers were professors at universities in the state, they often found that they could provide both resources and consultant help to clients. The project director, however, made no real efforts to extend these ad hoc linkages, since he feared that the project's budget could not absorb the consulting costs of professors who did not have a personal interest in the project.

---

[1] For an example of such involvement, see case study of field agent C-3.

All of the states also had some contact with the U.S.O.E. sponsored regional labs. The Far West Lab, in particular, actively pushed its products among the pilot states, and in a number of cases found willing customers. State B, for example, publicized the ALERT boxes (files of Far West Lab products which were available for free field testing) within the state, tried to make arrangements so that teachers could receive credit at a State University for taking the Lab's inservice "mini-courses," and instituted the "Toy Lending Library" (preschool development toys) in one of the target areas. They also adopted the Lab's materials for training of district communication personnel in the non-target areas. In State C, the reception to the Far West Lab's products was somewhat less enthusiastic, but the "mini-courses" were disseminated in at least one area.

State B was far more active than either of the other states in using the structures set up by the pilot project to disseminate new materials which were not requested by a client. In other words, as well as responding to client requests, they occasionally set up, or encouraged educators to take advantage of, new programs which they thought were worthwhile. These efforts do not seem to have detracted from the overall purpose of the program, which was to disseminate "tested" information; and it would seem highly desirable for future programs to encourage greater collaboration between the R and D centers and state dissemination networks, rather than allowing cooperative efforts to develop in an entirely *ad hoc* way. It should be emphasized that there is *nothing inconsistent in providing "validated" information on request from a client and using state dissemination systems to encourage more widespread use of new products, as long as the projects do not impose these new ideas or products upon clients*.

It is very clear that the present dissemination procedures at the U.S.O.E. regional labs are entirely inadequate for rapidly securing a national audience for their products. At present, the dissemination personnel (who cover several states) need to make contact with dozens of people simply to publicize the availability of products. Disseminating them is even more difficult, because of the lack of personnel. By using the publicity resources available to a state dissemination project, the burden of dissemination to individual districts would be alleviated, and the lag between product development and utilization may be shortened. The ability of two of the agents to create a felt need for the Far West Lab's mini-courses within their large target areas is evidence of the efficiency of this dissemination route. Furthermore, since the pilot projects have demonstrated their ability to reach smaller and poorer districts and personnel at lower levels within the school system, new products are likely

Linkages with Intermediate Education Agencies

Development of sustained linkages with intermediate agencies (two districts in State A, two intermediate service agencies (county-wide) in State B, and three regional resource centers in State C), was largely left up to the agents themselves. These organizations, it will be recalled, participated in the selection and hiring of the agents; it is understandable, therefore, that the SEA would give the agents a fair amount of autonomy in developing their own relationships in the agencies. These agencies both facilitated and hindered the work of the field agents in a number of ways, although it appears that with time all major problems were overcome. Here are some illustrative cases.

> Initially, several of the field agents did not have telephones in their offices. This meant that they could not contact potential clients except by using someone else's phone, by mail or through a personal visit. (Although we have advocated personal initiation of contact by the field agent (see above), we suspect that a number of clients would be willing to make a phone call later on.)
>
> One of the field agents situated in a regional office with several other educational consultants reported that a number of school needs were referred to her by the other staff members. She could then follow up on these needs with the knowledge that there would be some client interest in the service. Another way in which staff members helped her to publicize the service was by recommending that certain persons get in touch with the field agent.
>
> One field agent who worked in a large metropolitan district found that he was getting a number of requests for help that fell under the responsibility of another staff department in the district. Although the department was understaffed, it was not happy about someone else doing its work. This field agent was quite worried about the political problems that would arise if he was not careful to stay out of another department's domain of interest.
>
> Another field agent established very good relations with the director of the organization where he was situated. The director had worked in the area for a long time, and possessed a great deal of information about the characteristics of schools, school personnel, etc. He therefore proved to be an invaluable source of information for preparing visits to schools and in locating potential problem

areas. He also gave advice about how to get along with certain of the less "open" educators in the district.

A fourth field agent perceived the director of the organization in which he was situated as not terribly interested in helping him work out activities and strategies for the field agent role. Because of this feeling, he avoided talking with the director about his work for several months, despite the fact that he had inadequate office space to conduct his business.

Still another field agent felt that he could not operate in the district until he had clarified the responsibilities and boundaries of his role with his two "superiors." This clarification was not forthcoming, so he had to spend a great deal of time convincing all of the subordinates in the two major departments concerned with innovation that the services which he could provide would benefit them in their work.

In another case, a field agent who worked in a single school district directly under the Superintendent's office said that she would never have been able to do her job as effectively if he had not encouraged her from the beginning to operate independently with no "red tape" attached to her role. The Superintendent set her up as a separate department, in effect, so that she would not have to be responsible to anyone else.

One field agent was actually the head of the regional service center. Two other specialists were also attached to this center. The field agent delegated field agent-type activities to the other two specialists, and said of this arrangement: "Unlike other places, where they rely on one man, here the whole center staff is involved in the project. We're getting feedback from three people instead of one." A division of labor has developed to the point where the original field agent handles only high schools, while one of his assistants handles elementary schools.

The head of an intermediate organization set up schedules where and when the field agent should be in the schools. This schedule involved being in the office on Monday and Friday, and in each district in consecutive order on Tuesday, Wednesday and Thursday. The field agent felt that this interfered with the job since clients' needs did not always coincide with the schedules.

A field agent who felt closely identified with the intermediate organization stated that school personnel in the area were simply not aware of the multitude of services performed by the organization. Because of this lack of publicity it was felt that much of his most important work remained "invisible" and did not help in generating increased support for the program.

The main benefits of being attached to an intermediate organization seem to be (1) legitimization of the field agent role through association with an already existing organization, (2) provision of resources for increased awareness of problems or needs, (3) availability of technical assistance for follow-up work, and (4) provision of a supportive, informal environment. The extent to which the intermediate organizations facilitated or hampered the work of the field agent indicates that this is an aspect of the program that should by no means be taken for granted.

The effectiveness of the organization in supporting the role of the field agent is premised on two basic considerations. (1) In locating the field agent in an agency, care should be taken not to place him in a center which does not have a history of good service relations with local educators. Whether or not the field agent is officially independent of the organization, the client group will often identify him with it. Thus, to some extent the status of the field agent will be dependent on the status of the organization or of certain better known individuals in the organizations. While in all cases the prestige of being associated with the intermediate organization appeared to outweigh friction between the intermediate organization and the local schools, difficulties did arise on occasion. One agent, for example, noted that the principals in one district saw the intermediate organization as a threat to their own control. A teacher told the agent, in fact, that he should come around to her school when the principal was out, since he was very resentful of the authority of intermediate organization personnel. In another case, the intermediate organization tried to call a meeting of all of the

Superintendents in the target area in order to discuss the future of the pilot project during the coming year. While the Superintendents were interested in the prospect of discussing project activities, they were also somewhat concerned about whether the intermediate organization was exceeding its authority by conducting such a meeting.

(2) The organization must not only accept but give strong support to the field agent role, both in terms of gaining access and providing the agents with additional resources. In two areas the field agent's immediate supervisor gave him little assistance or guidance in publicizing the program, and this omission seems to have retarded awareness of the field agent's services.

With the exception of the lack of telephones and office facilities, the majority of tensions that occurred between the organization and the field agents were caused by a poor definition of the field agent's role. As we saw earlier, it was apparent that many conflicts could have been avoided if the field agents had made arrangements to discuss their ideas with and solicit comments from the organization's staff, had worked out some division of labor with the other consultants or specialists on the staff, and also had informed them of the kinds of benefits that they might derive from using an information retrieval service in their own work. This approach might serve to preclude jealousies or a sense of competition with already existing roles, and ultimately enhance the efficiency and effectiveness of the service.

It is possible that most of these field agents whom we have observed in the Pilot State program were quite lucky in being located in organizations where a great deal of help was available, and where little pressure or resentment of this new role was evinced. The one field agent who did have trouble gaining cooperation from the other members was the only one located in a fairly complex, bureaucratically organized city district. In this case the field agent's services did, in fact, overlap to a certain degree with services being offered by other departments. He was also the only field agent in a situation with highly formal lines of responsibility to other staff levels below the level of the Superintendent's office. The Superintendent himself noted that it was difficult to introduce a "research oriented facilitator" where there is already a county staff or section of special services whose job is to enter schools and stimulate interest in research. As the Superintendent pointed out:

> Unlike in [another district] where the field agent comes straight from the Superintendent and need never step over anyone when he goes to schools, [our field agent] is actually performing a model of the work that should be done by existing county staff people. The field agent must therefore step over the heads of [other staff members] to perform his role.

Although it appears that administrative and "territorial" difficulties have now been worked out in this particular area, the process was much more time-consuming than for the other field agents, who were able to behave more independently. Although this case represents only a single experience, it suggests that it would be advisable to locate field agents outside of an existing staff hierarchy, and also to encourage informal rather than formal cooperation with other specialists. This case further indicates that installing a field agent in urban systems may be considerably more difficult than installing them in less complex systems.

In two other instances, agents appeared to have been slow in developing collegial relations with others on the intermediate education staff, and in using the consultant resources available to them. In both cases the problem seems to have been at least partially a result of the agent's own inclinations to work alone, but social factors were also present. In one state, the project director hypothesized that the role assumed by the director of the intermediate organization was a causal factor:

> The degree of institutionalization of the project into the target districts is a reflection of the personality and working style of [the directors of the intermediate organizations]. [One of the directors] works to have all staff members communicate and know each other, while [the other] does not promote teamwork.

In the other case, the project director emphasized the use of state consultants whenever possible. The agent felt less motivated, therefore, to encourage local consultants to become involved in the project.

These observations suggest that careful consideration should be given to the amount of "freedom of action" allotted to the field agent, and to the department and level of the system in which he is placed. The field agents who were somewhat hampered by administrative prescriptions concerning their mode of operation have managed to overcome them for the most part. The field agent role, however, should be intrinsically non-bureaucratic if it is to be effective. That is to say, the agent must have a good deal of leeway in adjusting to the needs and idiosyncracies of the client and of his setting, and to move from one role to another without gaining bureaucratic approval. Finally, since the field agent will be one of many service specialists working within the district, special publicity should help the local educators to differentiate this new role from that of other, more traditional roles.

It should also be noted that the benefits of the field agent-intermediate organization relationship do not flow in only a single direction. The presence of a field agent may enhance the reputation and increase the influence of a district office or service center. In a number of cases, for example, the field agent has been able to involve local specialists in working on significant problems, thus enlarging the specialists' visibility and involvement. One field agent who was situated in a school district office worked intensively with the Superintendent to gain acceptance of new programs as part of long-range plans for the school system. Another entered an organization that was just beginning to develop a local image as a provider of educational improvement services, and his presence was instrumental in furthering this effort. In fact, the effect of the field agent's work in enhancing the reputation of the intermediate agency in which he is located may be decisive in gaining the support and active involvement of the agency staff.

Although the agents will naturally become involved in helping the intermediate organization achieve its goals in return for using the human and physical resources of the organization, it is important to guard against cooptation. The agents involved in this program were very self-conscious about the need to maintain a special identity for their roles, and to avoid becoming merely another staff member available in the intermediate organization. While some of the agents were more active in getting requests from intermediate organization personnel than others, in no case does it appear that the agent spent more time working on intermediate organizational projects than on other requests.

Developing Linkages with Local Schools

Again, this task was largely the responsibility of the field agents, at least within the target areas, and has already been fully described in Chapter 2. States A and B encouraged other educational personnel in their states to make use of the service and conducted extensive publicity campaigns to this end. Early in the program, State A's project mailed a letter to all non-target districts inviting them to appoint a liaison person to funnel requests from the district to the retrieval office. By the end of the first year, 57 out of 91 non-target districts had followed this procedure; and during the period of our survey, 20 percent of all requests came through a district representative (see Chapter 7, Table 7.27).

In State B the program was publicized through the SEA Newsletter early in the project. The staff decided not to conduct more extensive publicity until their retrieval capability could handle the increased load. Then, about nine months after the beginning of the project, the staff members visited the non-target districts and obtained the names of persons who would be willing to serve as contact persons. A few months later a training program was conducted.

All three states are moving toward the appointment of local school personnel in all areas These individuals are expected to perform their regular duties in addition to their informational role. Clearly, they will not have the time or training to diagnose problems, interpret materials and otherwise help educational personnel to solve their problems. Further, their identification with a particular subject area (if a teacher) or their higher organizational rank (if an administrator) will violate the very principles which have made the field agents so successful as "collegial generalists." On the other hand, it appears that the states have done little to extend the network of field agents per se. This would seem unfortunate, since the field agents have now been tested and proven, while it is equally clear that the "district information representatives" have been far less successful in stimulating requests from lower levels of the school districts and in promoting utilization. (See Chapter 12, "Outcomes of Field Activities.")

Conclusion

The pilot projects were obviously subjected to a good deal of pulling and hauling from an array of external agencies, while at the same time trying to establish relationships for the purpose of adding to their resources. By and large, they were quite successful in continuing to pursue their primary goals within this set of potentially cooptive and, on occasion, contentious forces. The only instance of goal-subversion that seems to have occurred in dealing with external agencies was the devotion to packaged services in State C as a consequence of trying to economize in purchasing the service of the regional retrieval agency and speeding up turnaround time. State B resisted this temptation, however, which means that a tendency to become a packet order service is not an inevitable outcome of being offered a flat rate package service. (See Chapter 13 for effects of packages on clients in State C.)

The only failure in establishing external linkages, and at that only a partial failure, occurred with institutions of higher education. Not only were the projects unable to afford the consulting fees, but they established relationships of reciprocity far less often than might be done with concerted effort. The hiring of a liaison individual within major institutions in the area would seem to be a fruitful arrangement, as suggested by the role played by two of our field observers who were on the faculty of nearby institutions.

The one serious problem that remains concerns the tendency of the projects to drift away from reliance on the multi-faceted role of field agents by enlisting part-time information personnel in local districts. This strategy may be politically and financially desirable in view of the inevitable withdrawal of large-scale federal funding for each project. But we would predict with considerable confidence that unless the key aspects of the field agent's role -- his status as an outsider, his repertoire of referral and change-agent skills, his ability to follow-up with clients, and so forth -- are preserved and even enhanced, the information services in the three states will lose much of their value. This point will be substantiated to some degree in Chapters 12 and 13 where we compare the effectiveness of extension agents with that of consultants and district representatives of the information service, and also indicate the significance of field agent follow-up in permitting longer and more thorough retrieval searches for clients. The projects must now resist the temptation to become so thoroughly institutionalized within local educational structures that they sacrifice the distinctive features of an effective, independent system of extension work.

In sum, the greatest threat to continuity and effectiveness of the three pilot projects is yet to be faced. Or in plain English, it remains to be seen whether SEA's and LEA's can do a vigorous job of extension work and information dissemination without the monitoring of a federal agency and its associated components.

PART V

CHAPTER 11

THE TRAINING OF PROJECT STAFF -- METHODS, OUTCOMES AND CONTINUING NEEDS

In addition to the three state projects and the evaluation team, the U.S.O.E. supported a training project to be conducted for all state participants. The purpose of this chapter is to document and evaluate the efforts of the Pilot State Program's training component.

Three types of concern are addressed in this chapter. First, summative effects will be reviewed wherever possible. With the exception of the third training session, such effects are restricted to the trainees' expressions of satisfaction or dissatisfaction with training in particular skills or substantive areas, or with our assessments of training needs following specific training efforts. As already emphasized, the Pilot State projects were relatively unprecedented affairs. This means that the training team should not be held responsible for having failed to anticipate or to resolve all the problematic issues that emerged. This circumstance does place a permium on our second concern in evaluating the training program, however, which is the team's responsiveness to emerging needs expressed by project personnel, U.S.O.E. and the evaluation component.

Finally, our third concern is with the model underlying the training program. Following our chronological review of training efforts and outcomes, this model will be described and compared with alternative models in terms of applicability and theoretical strength.

The Goals of Training

A border state university was notified on June 22, 1970, that its proposal for training of personnel in the Pilot States Dissemination Program had been accepted. On August 12, the training team participated in a meeting of representatives of each project, the evaluation team, and USOE. At that meeting, the participants got acquainted and sought to articulate the goals of each project.

The objectives outlined in the proposal for training were expressed as follows:

For all trainee staff to be able to:

1. Construct a systems design for the dissemination of information.
2. Describe and categorize the essential components in the change process.
3. Function as a team in approaching information dissemination.
4. Understand and practice the problem solving process with specific kinds of problems from awareness, to data collection, to alternative solutions, to consensus, to implementation, and to reinforcement.
5. Communicate effectively in verbal and written language and in non-verbal language.
6. Develop rapport with a group and engage effectively in group processes.
7. Identify the educational power structure in the state in which they function and also in the geographic areas which are target areas for consideration.
8. Describe precisely the organization of education in the states in which they function.
9. Identify the obstructions and deterents to the execution of the programs on which they will work.

10. Formulate a plan of action, develop a system for continuing assessment of this plan of action, and develop a program of communication both for the plan of action and for its evaluation.

The project director should be able to:

1. Function successfully as an administrator including specifics such as -- prepare and administer a budget, delegate responsibility, utilize staff in the decision-making process, conduct staff meetings and supervise staff.
2. Describe and understand the ERIC system and other pertinent systems useful to the dissemination process.
3. Develop a system for acquiring and utilizing consultant expertise which includes identifying and developing means for using consultants. (This may more appropriately be a part of the responsibility of the Reference and Retrieval Staff, but the Director may facilitate this.)
4. Recognize and diagnose problems in the dissemination and change process.
5. Develop a monitoring system for the program.
6. Allocate resources on a cost-probable benefit ratio.
7. Develop a system for staff and activity evaluation.

The Reference and Retrieval Staff Members should be able to:

1. Describe in detail the components, structure, and function of the data system.
2. Search the data system for information on specific problems.
3. Prepare reports on specific problems or questions utilizing the data systems.
4. Identify, develop and correlate with existing data systems, a system for accumulating, providing access to, and disseminating information relating to projects and programs within the state which are not included in the information in current data systems.
5. Effectively catalog and cross reference materials of all kinds into the data systems.
6. Construct simplified, topical and subject oriented reference catalogs for use by the field agents.

7. Use effectively the services of secretaries and other subprofessionals in the search and dissemination process.

8. Identify and develop means for using consultants which include identifying expertise and competence of consultants and also the means for injecting these data into the system for appropriate use.

Field agents should be able to:

1. Conduct an interview effectively.

2. Develop rapport with individuals and groups.

3. Analyze problem situations, discover alternative solutions, and point possible directions.

4. Function as a catalyst. (change agent)

5. Demonstrate a working knowledge of newer developments in education such as modular scheduling, individually prescribed instruction, team teaching, autotutorial instruction, interaction analysis, use of nonverbal behavior, operant conditioning, et cetera.

6. Analyze a school community.

7. Construct a deliberate change system model, develop a plan for its implementation, and assess its probable chances of success with and without the inclusion of various alternative component factors.

At the August 12 meeting, the above goals were reviewed and discussed. Suggestions were taken for priority concerns and training needs, and by August 26 an overview for the first training sessions was sent to USOE. At the end of the meeting, it was agreed that the evaluation team would design and circulate a goals checklist so that comparative information about the objectives of the three states would be available to the training team and others involved in the program.[1] A date was set for the first training session to be held on October 19, 1970, at the university where the training team was located.

---

[1] See Appendix B for the goals checklists, and Chapter 1 for analysis of the director's goals.

The First Training Session

Preparation

The training needs of State C were assessed by the training team during a site visit on August 31, 1970, at which time the trainers visited an intermediate center, the assistant state superintendent, field agents, and the retrieval center. On a subsequent site visit to State A (September 29 - October 1), the training team visited the retrieval center, the project's Advisory Committee, state consultants and administrators from the target area.[1] They also toured schools in target districts. The site visit to State B (October 5-8) entailed a visit with the project director and the state board of education, the State's Total Information System, several superintendents in target areas and an Intermediate Education Center. Prior to the State B site visit, a tentative program for the first training session was sent to USOE (October 2, 1970).

The above site visits were part of step 2 of the Training Proposal. In conjunction with these site visits, a questionnaire was distributed through project directors (September 24, 1970) to be returned by October 8. This questionnaire was a 13 page document aimed specifically at retrieval staff. Each retrieval staff member was asked to indicate his or her familiarity with a variety of theoretical and technical areas related to information retrieval. On the basis of this document subjective needs of retrieval personnel were to be identified. Although specific names were requested on each questionnaire, grouping for training of retrieval staff personnel was either on the basis of role, total group or state project. Apparently, specific needs expressed in the questionnaire were not used as a basis for grouping.

---

[1] The field agents had not yet been hired in States A and C. This delay was a severe handicap in planning for the first training session.

The Training Session

The tentative format for the first training session, which was distributed for approval and suggestions, was changed to include a feedback session for project personnel. Another, more significant change, which was suggested by one of the evaluation field observers, was a simulated case study in which all retrieval and field agent personnel were to be involved.

In an informal conversation with the evaluation director, the training director stated the following goals and methods for the first training session:

Training Goals	Training Methods
1. Interviewing skills	1. Interview with Administrators
2. Knowledge of change process and how to motivate people to change	2. Monday Sessions--Lecture and group experiences with feedback
3. Teamwork	3. Tuesday session a. Retrieval Staff and Project Directors - Lecture Method b. Field agents - Morning Lecture Afternoon- Interview Administrators and 1 hour to discuss problems to be researched
4. Familiarity with retrieval systems	4. Review of local Industrial Referral Center
5. Gaining Access and building rapport	5. 6. Lecture, movies, some discussion 7.
6. Communications with retrieval staff and client	
7. Public relations	
8. Broader scope about education: What education will be like in the future.	8. Friday session - Lecture and visitation to computer center

The only plan for self-evaluation during the training period was a feedback session at the end of each day. As indicated by the Training Director in a letter to the participants prior to the session, feedback to other project members was to be effected as follows:

> On Tuesday, Wednesday and Thursday afternoons, at the close of the training sessions, you (the participant) will have the opportunity to meet with your team members. At this time you will discuss what you learned and decide how it will apply and be used in your project. You will choose a recorder for your group so your utilization plans will be in written form.
>
> The Training director will assign a person to your state group who will feedback recommendations to the director and associate director so that changes may be made to render the training session more valuable and meaningful.
>
> At 8:30 on Wednesday, Thursday and Friday mornings, the report on how each state director will use the information from the preceding day will be given orally to the entire staff. It will be distributed in written form later that day.

The orientation of this feedback mechanism seemed to assume a project-centered approach in which the point of the feedback was to faciliatate the absorption of training information into "back-home" project format. There seems to have been no mechanism for reshaping the training _per se_, however. Thus, this function tended to be served during the informal luncheon gatherings of project directors and training director, or on a one-to-one basis between participants and training personnel.

Prior to each training session, the training team provided for each participant a bibliography of materials related to the change process in education. Also, copies of books specifically related to change and dissemination in education were furnished.

Before the first training session, the evaluation team had established only a tentative relationship with the training team. The extent of feedback from evaluation personnel was minimal and generally limited to phone suggestions. Two evaluation personnel attended the first training session.

Training personnel for the first session were exclusively from the area of the state. Although efforts may have been made to draw them in, experts in educational dissemination from outside the state were conspicuous by their absence. Table 11.1 presents a breakdown of the specialties of training personnel.[1]

TABLE 11.1

SPECIALTIES OF TRAINERS IN THE FIRST TRAINING SESSION

Specialty	% of Personnel
General Education	46%
Training and Staff Development	4
Educational Research Dissemination	7
Industry	7
Public Schools	13
Library	13
Agricultural Extension	10
	100%
Total Personnel	(30)

Three persons specialized in what might be designated as communication skills, an admittedly large part of the skills required of a field agent; and two persons had specific skills in research information retrieval. The first training session, however, appeared to be heavily oriented toward general theory of group processes with some reliance on the applicability of the agricultural extension and industrial referral models to educational dissemination. The bibliography that was provided, however, focussed on educational dissemination.

In reviewing the comments solicited by the questionnaire sent to participants following the first training session, the great majority of respondents commented on their need for more training in communication skills. The two other concerns were that there was too much lecturing, i.e., not enough participatory learning, and that training needed to be more specific.

---

[1] Based on current titles as indicated in vitae.

The following breakdown of time absorbed by different methods of training lacks specificity (Table 11.2).[1] For instance, time spent in "directed learning activities" included some portion of lectures. Also, the fact that learning activities were directed does not mean that it dealt specifically with the needs of participants. Both of the specialists in retrieval skills were seen as desirable, and comments of participants indicated a need for increased contact with them. The organizational skills of one of them were appreciated, while the technical retrieval skills of the other were singled out for praise.

TABLE 11.2

METHODS OF TRAINING IN THE FIRST SESSION

Method of Training	Percent Overall Time
1. Lecture	20.7%
2. Directed (optional) films	3.9
3. Discussion	11.3
4. Directed learning activities	24.6
5. Self-development	39.4
	100% (50.7 hours)

The overall formality of the program gave the impression that there was a substantial body of information which needed to be transferred to the participants, and that the appropriate direction was according to the established analog of the agricultural extension system. Since it is likely that USOE funded the training team partly on the basis of their expertise in agricultural extension work, this approach is not surprising. It appears, however, that the original needs assessment of the training team, as well as their site visits, did not identify the peculiar needs of educational field agents or the more specific needs of retrieval personnel.[1]

---

[1] Distribution of time among various methods is based on the printed program and on tape recordings of individual sessions.

One of the directors of a state project put it succinctly:

> My general impression of the entire training session (maybe this is the way it should be) is that you are attempting to train us to follow the pattern of operation that has made your field agents successful. We prefer to be trained as agents so that we can act in the mode of operation that we have outlined in our proposal.

Another director commented:

> Parts of the program should be flexible where the participant could have a choice in selecting topics or where the topic and activity could emerge from the group.

The proposal of the training team anticipated needs in such areas as group dynamics, change theory, communications, interviewing, etc., and solicited interest in these areas from site visits, particularly with the field agents. But the format and content of the training session seemed to gloss over these areas.

Following the first training session, the evaluation team wrote to the training director to express the following judgements of the training session with reference to what appeared to as to be certain uncritically held assumptions.

> The assumption of programmatic autonomy — This is an assumption which, I suspect, many of us have shared. It should be clear by now, however, that the dissemination program is not an autonomous element within the respective SEA's. By and large, the three projects represent an expansion and recombination of former resources within the SEA's. Probably all of the elements of the pilot projects were present in the past, e.g., consultants to schools, information about educational

---

[1] A pretest of retrieval knowledge and needs was given to personnel in State A. Also, it should be borne in mind that only a portion of the staff had been hired in the three states.

practices, intermediate service units, etc. These resources are now being better coordinated and expanded by virtue of the USOE funding for the pilot program. What this means operationally is that training for collaboration with existing programs and divisions within the SEA is required. How does the pilot program utilize Title III developments, for example, or work with specialists in the SEA, or get the most out of its intermediate service structures? These are questions where were virtually omitted from the format of the training sessions.

This omission is not entirely the fault of the training program, for it seems to me that the three State project directors did not sufficiently spell out the extent to which their projects are integrated with existing SEA structures (with the possible exception of State A). Further, the pilot dissemination program has been billed as a great white hope, that is, something totally unique which will save education. This sort of billing has promoted the idea that the projects in each State are virginal and autonomous entities within the SEA. What is unique is the recombination of elements, but this should not imply organizational autonomy or the absence of a need for teamwork within the SEA. In fact, it should imply just the opposite.

The input-linkage bias The training sessions were entirely devoted to facilitating input to the system, that is, diagnosing the problems of clients, translating the diagnosis into information needs, retrieving information and sending it back through consultants and field agents. (The only possible exception is the feed-back to the administrators who were interviewed, which I missed because of my early departure.) What will happen when the field agent or consultant confronts the client again (with or without information in hand) remains unexamined. In other words, all the emphasis was placed on input-linkage rather than output-linkage. This is a bias of the State agencies as well of the training program, I believe. What worries me is the possibility that the dissemination program will fail to solve the biggest problem of all: helping the client understand, interpret and utilize the information. It is one thing to furnish information which is pertinent to a client's need, and quite another to help the client to use that information. (The adage about leading a horse to water is appropriate here.) Another possible consequence of neglecting the process of output-linkage is that the States will experience an overload of information requests in the near future. That is, they might have more requests coming in than they are able to process effectively for the clients, including the follow-up role of the field agents who might also become overloaded.

The context-free assumption

Although some attention was given to the public school context in which information is to be utilized, there is far more to say on the subject than was covered in the training sessions. The session on assessing schools was devoted to a discussion of how laymen and professional educators look at schools, e.g., financial support, college-going rate, extra-curricular activities, SES of community, accreditation, etc. No one would argue with the importance of these dimensions, and indeed I doubt that the field agents had to be reminded of their importance in differentiating schools. A consultant mentioned a few other characteristics of a more sociological nature, i.e., centralization, complexity, formality, emphasis on volume of production, and stratification. His presentation stirred some interest during the later discussion period precisely because these are attributes which the participants were not likely to have thought about. But there are a *number of other* properties of the educational context which affect innovation, e.g., the semi-professional status of teachers, the vulnerability of the school to local and national communities, the diffuseness of educational goals, etc. No amount of interpersonal finesse will obviate the importance of these attributes in facilitating or hampering change in particular situations. The field agents should therefore be able to take these system attributes into account in their interactions and proposals.

The assumption of managerial competencies

I was struck by the fact that no provision was made for training the project directors to fulfill their managerial roles. The directors were informed about the problems and roles of retrieval and field staff, but not about their *own* specialized problems and roles. There seems to be an assumption that the project directors are fully qualified to perform their new job by virtue of their past experiences. I wonder how valid this assumption is. If the pilot dissemination program entails a *recombination* of elements in the process of information diffusion and innovation, then one would think that special skills and knowledge would be required to manage this process. For example, the directors might benefit from training in two-way communication with their staff, especially since part of their staff are located at considerable distance from the SEA. Also, they might benefit from knowledge of typical *styles* of management, each of which has special advantages and disadvantages.

The technological bias in information retrieval

When I attended one of the sessions with a trainer in which he was supervising the retrieval staff in the translation of a problem into ERIC discriptors, I discovered for the first time how much depends upon the retrieval staff's familiarity with current educational developments. The technology of the retrieval system, including the ERIC thesaurus, is no substitute, it seems to me. I felt that the retrieval people needed some education about education -- its current trends, its special terminologies, its research fields, its controversies, etc. The monograph by Goodlad which was distributed might help in some respects, but I frankly doubt that the participants will read it. We assume that a familiarity with educational processes and structures, especially the more innovative ones, is important for the field agents, but tend to overlook its importance for the retrieval staff as well. Perhaps we need to bear in mind that it is the retrieval staff who must translate the client's problem into the official language of professional education so that pertinent research can be located. I detect a certain "retreat to technology" in coping with this issue.

The assumption of historical uniqueness I'm a little concerned that the participants are relatively ignorant of the developments in educational R, D & D over the past fifteen years which have led to the present dissemination program. There are a number of experiments in education diffusion around the country which the participants might like to know about. Some places might even be using field agents in much the same way as the pilot program. I would seem unfortunate not to exploit these resources, at least for the purpose of giving the participants a comparative framework so they can appreciate the true distinctiveness of their own work, but more importantly for the information that might be gained about operating their own program. Also, if the participants knew what problems in educational innovation were hopefully overcome by the design of the program (as a result of sifting a great deal of past experience in educational innovation), they might be able to better appreciate their role and to avoid the pitfalls of the past. If they had a greater sense of historical continuity, their commitment as well as their knowledge might be enhanced.

As will be seen below, the training team sought to follow-up on several of these criticisms. As a matter of fact, it put the evaluation team somewhat on the spot by immediately responding to the criticism that similar efforts elsewhere could be identified and exploited. As it turned out, we were unable to furnish the training team with a list of other programs without taking a good deal of time. Our criticism had been based on impressions of the extent of innovative efforts elsewhere rather than on specific knowledge; therefore, we had been guilty of overstating the case. Later (for the third training session), the training team managed to identify and recruit certain outside experts on their own. Efforts were also made to correct the assumptions of "programmatic autonomy", "managerial competencies," and the "context-free"assumption, as we called them in our letter. This will become plain when we come to the third training session. Where the team failed to follow-up was with respect to the "input-linkage" bias and the "technological bias in information retrieval."

In view of the field agents' continuing expression of need in the area of follow-up work (or output interaction) more than a year later, it would seem that our criticism of the "input-linkage" bias was especially warranted.[1] Apparently, the training team felt that the agents should not become very involved in implementation owing to their lack of substantive expertise; rather, technical assistance should be called upon when moving into further elaboration of the information and implementation. This seemed a quite valid strategy in the beginning, but in view of the difficulties encountered in trying to bring technical assistance to bear on client's problems, it would have been advisable for training to have devoted more attention to helping the agent with his own follow-up activities. Also, because the agents were not regarded as being responsible for in-depth work with clients, no guidelines were ever furnished to help agents decide when to engage in deeper analysis and collaboration with particular clients.

The Second Training Session

Preparation

On December 21, 1970, the training team decided, based on results of a feedback questionnaire and discussion at the first training session, to hold the second training session in each state following site visits. This change in plans was approved by USOE on January 12,1971.

---

[1] As mentioned in Chapter 4 with regard to a "training needs" checklist: "Six items out of eighteen which were relevant to the field agent's role were (cont.)

Prior to the January 12 date, the evaluation team distributed two papers based on their first goals survey, "The Goals of the Field Agents of the Pilot States Dissemination Program", and "The Goals of the Project Directors of the Pilot States Dissemination Program." Both of these documents made available to all project personnel, as well as to the training team, a variety of indicators of training needs and priorities as expressed by project directors and field agents. On occasion the documents entered directly into training. For example, upon observing that some directors wanted the field agents to be both "businesslike" and "warm" with clients, the author stated:

> ...it is almost impossible for an individual to be both warm and businesslike at the same time. In trying to accomplish these two goals, the field agent will have to move between his role as "personal friend" and his role as "busy field agent."

The paper further pointed out the great variation in intended methods of operation between field agents, both between and within states. It indicated a need for a number of role possibilities for field agents and the need for bringing out differences between objectives of project directors and of field agents in order to clear the air and clarify expectations. These were only a few of the areas examined in the two documents which had implications for training. And perhaps our findings of goal variation, along with certain negative feedback from participants toward the centralized format, prompted the training team to de-centralize training for its second session.

(cont.) marked as of "utmost concern" by at least five of the seven agents. Of these six items, five related to output interaction."

State C

On January 25, the training team began a four and a half day site visit in State C. This visit entailed observation, counseling and some on-the-spot training. The trainers took one retrieval expert with them and spent three days in the field reviewing the work of the field agents and advising their secretaries. One evening was spent discussing problems and planning the training program.

The training team visited the retrieval center and conferred with the director. On February 8, 1971, the retrieval expert visited the retrieval office to assist the single retrieval person with the design of a questionnaire. This visit was a response to a specific need and was very much appreciated. The retrieval expert not only helped in the formation of the questionnaire, but did some public relations work with the state specialists, alerting them to computer applications and encouraging dialogue.

The purpose of this site visit was to prepare and plan for the second training session. An indication of dissatisfaction was recorded by the evaluation project's field observer on the part of State C's project director concerning what was to be covered in training. Some inflexibility on the part of the training team, defined as not responding to felt needs of the director, was expressed. It appears that the training team was unable to bring dissatisfaction to the surface in order for it to be faced and resolved.

The field observer suggested that superintendents or principals who had been exposed to the project should be used in future training sessions. As we will see, this suggestion was definitely followed-up by the training team in its third round of training.[1]

In a letter of February 16, 1971, the training director outlined the following objectives for the second training conference.

Wednesday morning, March 3

> Objective 1 - Each resource agent will identify five technical assistants and be able to list two of his responsibilities.
> Procedure: Project director will contact the technical assistants and ask them to give a five minute presentation about themselves and their work.
>
> At noon luncheon, the field agents and the technical assistants will becomome better acquainted.
>
> Objective 2 - The technical assistants will be able to identify the three resource agents and state how they have used the services of a technical assistant.
> Procedure: The project director will contact each resource agent to give a five minute review of their accomplishments when using the technical assistants.
>
> Objective 3 - The technical assistants and resource agents will be able to list three ways of successfully getting the schools to identify and solve their problems.
> Procedure: The project director will contact two superintendents who have used the services of the resource agents. They will review the case and give their reaction.
>
> Two training personnel will comment on the procedure.

Wednesday afternoon, March 3

> Objective 4 - Each resource agent will write the procedure to be used in obtaining a technical assistant and outline the three methods of follow_up.
> Procedure: The project director and his staff have written the procedure for securing and assigning the technical assistant to the school district. The project director will review this for the technical assistants and the resource agents.
>
> Two training personnel will comment on this plan.
>
> The project director with the assistance of the other member of the project will discuss and record three methods of follow-up. (This will be distributed in written form at the end of the training period.)

---

[1] To some extent this was actually done in the second session in State C.

Thursday, March 4

Objective 5 - The secretaries in the regional centers will code two requests and demonstrate in writing how they keep records on the requests.
Procedure: A trainer and the retrieval specialist will review the training given on the site visit, January 25-27. The resource agents will give each secretary two requests to code and prepare for the reference center manager.

Objective 6 - The resource agents will list three methods of returning the print-outs to the requester and possible ways of follow-up.
Procedure: Two trainers will discuss the "second step" for the resource agents (this involves the human resources). They will examine three or four cases that have been completed. These will be used for group discussion.

Objective 7 - The resource agent will list four similarities of Havelock's model with the training of the training team.

A trainer will discuss Havelock's model and at the same time mention how the training reinforces Havelock's model.

Another trainer will discuss problem solving.

Objective 8 - Even though an excellent model is designed, all members must see how essential good communications are. Each member of the project will vocalize two ways to improve communications.

In a letter of February 17, 1972, the training director outlined the following problems and needs:

A. Problems

1. Internal relationships
2. Lack of communications throughout
3. Still a lack of understanding on roles and who is responsible for various activities
4. Information isn't being sufficiently utilized at the local level
5. Lack of state specialists (assigned by the Technical Assistance Coordinator)involvement at all levels

B. Needs

1. Directional leadership
2. Clearly defined communications channels
3. Concise job and position descriptions
4. Understanding and a commitment on the part of the technical specialists
5. Understanding on procedure of how raw data is to be tied in with human resources and applied to the local problems
6. Understanding self evaluation procedures

C. Training Needs

1. Develop communication channels and instruments which include those parts of the system that have mutual concerns
2. Develop guidelines for incorporating the use of technical specialists into the project at various stages
3. Train the regional secretaries to do the preliminary search in the regional centers
4. Learn how to utilize the raw data
5. Delegate responsibility and get the local people in the position of leadership
6. Begin to develop staff evaluation procedures

The above statement outlines in clear terms the need for communication and management assistance within State C's project, problems which were later confirmed independently by the evaluation team and discussed at length in Chapter 9.

The training staff also pointed out in its preliminary final report that the number and variety of visitors to the projects tended to create confusion in goals. They further pointed out that the pilot nature of the program produced a great deal of uncertainty. The administrative and operational structures for field agents also contributed to uncertainty regarding expectations and accountability between state, local and intermediate units. These observations are further verified by reports of the evaluation team's field observers.

The second training session in State C represented 11.5 hours of contact, 30 percent of which time was spent in lecture and 70 percent in directed learning experiences, according to the printed schedule. No time was specifically allotted for open discussion.

From a perusal of correspondence during the planning phase and from comments of the field observer in State C, it seems that there was significant variation in the needs expressed by project personnel. This variation could have been dealt with by the training team in open discussion by soliciting differences in role perception, and then developing some means of negotiating these differences. Instead, the training team seemed content to remain on a substantive level.

The issue raised by the occurrence of role dissensus is one of the degree to which the training team was responsible for overall program intervention. By not coming to grips with this issue, the team seems not to have accepted the possibility that the creation of a new role (the field agent) would require not only educating the occupant of that role, but intervening through training to modify administrative pressures and decisions based on pre-conceived ideas about the role of field agent.

Nevertheless, the second training session was viewed by participants as having been more relevant to individual problems, and therefore as considerably more productive than the first session. One staff member in State C summed up the general impression:

> I see this type of training program as being more relevant to our immediate needs, as the information pertained directly to our state operation.

This is not to say that certain training needs did not persist. According to our analysis of the most important goals which each participant had found most difficult to achieve (based on the second goals survey described in Chapter 1 and conducted several months *after* the second training session) all three *field agents* and the *project director* in State C reported problems in dealing with local schools, e.g., stimulating an interest in the service among administrators, setting the terms of the relationship between field agent and client, helping school personnel to clarify their goals and to install new practices, helping with interpretation or adaptation of information, and following-up in the schools to determine use and effects of materials. Two of the three field agents were especially desirous of drawing upon SEA and university resources for technical assistance.

Similarly, the problems reported by the *retrieval manager* suggest that the training team had not yet succeeded in penetrating to the level of daily routine. Here are some of the topmost problems, according to the retrieval staff member, that persisted *after* the second training session: setting up procedures and criteria for selecting information resources to be recommended for initial purchase; developing systems of processing and classifying information resources; developing packages of problem-solving material for the local level; gaining familiarity with methods of obtaining information from various sources (specific matters such as time required to get material, format in which it could be procured, cost, etc.), and providing evaluation and selection of information after it was acquired from ERIC or some other source. In addition to the needs and problems identified through means of our surveys, there were the continuing problems of intra-project communication and assistance from the project director, discussed in some detail in Chapter 9.

The persistence of these issues, needs and difficulties in spite of the training team's on-site assessments and training efforts suggests that thusfar the team had not been highly successful in State C.

State B

On February 8, 1971, the training team visited the SEA and one of the target sites for their second needs assessment. During the site visit, emphasis was placed on counseling of field agents and retrieval staff. Thus the site visit merged into a training session. February 8-10 were visits to field sites, and February 11 and 12 were designated for formal training. Due to this dual function of the visit, more substantial training took place than had been anticipated.

The formal training was based on a list of anticipated needs established by the training team.[1] The following are the types of needs that were expressed: handling information, 34 percent; decision-making priorities, 4 percent; internal management, 43 percent; external management (change), 19 percent. The greatest concern was expressed for help in internal management. This included requests for assistance in methods of reporting to the project director and team planning. These needs would seem to call for some directed negotiation among staff members. Of the 10.5 hours of actual training time, however, 62 percent of the time was spent in lectures and 38 percent in directed learning. No time was formally set aside for open discussion.

It is essential to understand the difference between directed learning and open discussion. Directed learning is structured by the trainer to evoke specific kinds of responses, e.g., views concerning how to process material or how to set priorities. Open discussion solicits concerns which do not appear on the agenda and which have remained below the surface." Insofar as direction takes place, it entails eliciting hard-to-talk-about concerns which the trainer recognizes as interfering with communication.

---

[1] The actual training program was finalized with the project director on the evening preceding the two days of training.

The overall response to the second training program was positive. There are even indications that certain questions of internal management were dealt with. According to one member of State B's project:

> A number of suggestions and points which helped to improve the director's role in the program were emphasized. Among these were:
>
> 1. The need for more frequent and structured meetings for the retrieval staff.
> 2. The realization that the responsibility of the program should extend beyond the dissemination aspect of the program and include wherever possible the follow-through for effective implementation of ideas.
> 3. The need for periodic meetings which include the field resource specialists.
> 4. The need to consider and plan for summer activities.

The combination of site-visit and training seems to have led to a more relaxed and integrated training experience. As pointed out by another member of State B's project:

> I felt the training team attempted to guide us through an experience that would be most valuable to us. Good job! It is difficult to describe everything that took place here in my county during the on-site visit. It was a tremendous value to me to be able to discuss in some depth what I was feeling and doing with people competent enough to turn what I said into a meaningful learning experience. Basically, the trainers listened to me, then tried to offer the kind of help, information, or suggestions that were most appropriate. If I had to make a decision: "one or the other?" I'd have to take the on-site visit over the group meeting as being most valuable to me. However, the group meeting in (city) did lay the foundation for more meaningful, more sweeping improvements in the project as a whole.

Other comments of the project staff are also indicative of satisfaction:

> It was the first time the entire team spent a prolonged period of time together to share ideas. It was most helpful in crystalizing the overall objectives of the program and identifying the roles and responsibilities of individual team members.

> As a result of the general discussion on Thursday, I have a better conception of how our project fits in with the systems management and broad objectives of the state Board of Education.
>
> The review of my own case was valuable in that the suggestions and comments received from almost everyone gave me a better grasp on my catalyst role and the problem-solving approach...
>
> I learned a great deal more about descriptors and coding techniques from (a trainer). He was very helpful and with his instruction I have been able to code requests for the QUERY searches. This has broadened our retrieval service.
>
> I picked up the point that we should try for different solutions to problems -- since we are a pilot project, it's good for us to try all sorts of solutions methods and pick those which work best for a given set of circumstances.
>
> I see this type of training program (site visits to states) being more relevant to our immediate needs, as the information pertained directly to our state operation.

In light of such comments it would be misleading to focus only on the formal training that was given. Taking into account the extended discussion which occurred during the on-site visits, it is apparent that the total experience contained elements which temporarily satisfied the training needs of field agents, a group which heretofore had indicated dissatisfaction.

According to our survey of difficult goals, however, it appears that a wide range of problems persisted in State B. Although the participants in State B tended, on the whole, to be more open about their problems than those in the other two states, the large number and wide variety of difficult but important goals expressed by the project staff suggest that the training team still had a good deal of work to do. As in State C, the director and his associate manager, who was also in charge of retrieval, mentioned several problematic goals in dealing with local schools, e.g., assisting clients to evaluate innovations resulting from the service, providing the schools with alternative solutions, interpreting or adapting information obtained from the retrieval system, stimulating a demand for the service among administrators and teachers, helping to clarify the goals of school personnel, helping schools to install new practices, and developing a training program for school staff to become "self-renewing." The retrieval staff (including the associate manager) expressed difficulty in achieving the important goals of determining the most efficient means of answering requests in terms of speed, quality and cost, evaluating and screening output from ERIC and other sources, setting up a selective dissemination system, and analysing the effects of the information service -- just to mention a few of the persistent problems that were expressed.

With respect to the field agents,one of them indicated very few difficult goals which were of great importance (only six) while the other mentioned more than twice as many (14). Three of the problematic goals were held in common, however: helping school personnel to set new educational goals, improving their own understanding of research in education, and extending their knowledge about available information sources other than ERIC and packages. One of the two agents was especially concerned about establishing "clear-cut priorities to determine which requests for help or information are most important." Inasmuch as this was the agent (B-2) who later suffered from the greatest case load, and therefore engaged least often in follow-up work, it is unfortunate that the training team was unable to help the agent maintain a better balance between input and output interaction with clients at the time of the site visit. Finally, this agent was also desirous of help in assisting clients to evaluate innovations resulting from the service, and in facilitating field trials of new practices. All of these most problematic goals fell within the training team's responsibilities.

State A

The pattern of merging a site visit with training experience was extended to State A. On March 28, 1971, the training team (5 persons) travelled to State A for five days, three of which were designated as site visits and two as formal training. Each trainer spent approximately two and a half days in the state. During the site visit phase, the trainers accompanied the field agents to several schools, visited with the principal and several staff members and discussed their learning resource center. They also visited the retrieval center and held a team meeting to settle training program plans.[1]

Both field agents reported difficulty in establishing rapport with the training team and in getting them to focus on their day-to-day problems. The success of the in-depth training and counseling that the team was able to provide for field agents in State B was not duplicated. Based on field observations and reports of the evaluation team, the three state projects could be ranked in terms of accessibility, State B being the most accessible and State A the least accessible. For training purposes, accessibility is reflected in the ease with which a trainer can penetrate formalities and reach underlying problems and areas of need. Some variables that indicate accessibility are 1) degree of trust in the trainer, 2) degree to which the trainees are aware of needs and able to express them, and 3) a positive attitude on the part of project staff toward out-groups in general (if cohesion is developed by the maintenance of common enemies, the trainer must deal with additional defensiveness).

---

[1] As with State B, the training program was finalized with the project director on the evening preceding the training period.

Elements such as these apparently affected the training approach used in State A. The second training session in that state provided for 20 percent of its formal training time to be devoted to "Sensitivity Training and Group Process Emphasizing Participation." This was the first direct attempt to intervene in the internal group processes of a project with the intention of bringing problems to the surface. Unfortunately, no attempt was made by the trainers to share this goal with the staff, and the training device failed to develop a free, open atmosphere. Rather, it tended to confuse participants and in some cases aroused suspicion.[1] The approach is described by the trainers as an "Inner Circle Approach with input from outside then person giving input leaving the group to deal with the input among themselves." Although the approach was designed to solicit below-the-surface problems through open discussion, it was over-structured. More precisely, it assumed certain characteristics of directed learning with the participants attempting to decipher subject matter. Had the training team shared their need for more transparency from the project, the project state might have been able to reach some decisions on the matter. In addition to this effort at open discussion,lectures were scheduled for 50 percent of the time and directed learning for 31 percent.

The first day of formal training dealt with "loosening people up," that is, establishing a relaxed, non-critical atmosphere. Interaction in terms of training issues remained superficial, however, and occasionally the purpose of the session became obscure.[1] The focus of the first afternoon was on the role of the field agent. Although both agents had expressed interest and concern in the issue of their being agents of change,[1] whenever the subject was raised in the group it was quickly dropped. Attention quickly shifted toward the processing of information.

---

[1] This conclusion is based on the field observer's interviews with the project staff and observations of training sessions.

The second day of training was devoted to establishing information priorities. Priorities listed were: 1) state department, 2) target areas, 3) school districts and 4) others. The possible implications of this ranking were not dealt with. Roles of field agents were discussed, but the discussion remained on a very abstract level. Concern was expressed over the forthcoming survey of clients by the evaluation team. Rather than trying to surface deeper concerns, the training team validated the fears of the project staff by questioning the usability of the questionnaire.

Overall response to the trainers was positive, especially with regard to the individualization of the site training as contrasted with a joint session for all three states. Some staff members, however, indicated a [illegible] for more specific help in certain areas. Here are some typical comments elicited by the training team in their follow-up questionnaire:

> ...the individualization was more valuable to the (State A) group...One significant aspect of this type of program was that all staff members could participate in the training sessions.
>
> This second training program was aimed more specifically at (State A's) particular needs. However, I don't think that this means another group session of all three states and (the training team) could not be beneficial...
>
> I have more awareness of certain project areas which I previously did not have.
>
> Received many helpful ideas of how to better set up and perform such duties as billing, ordering micro-fiche, receiving payments, filing, etc.

---

[1] In response to our goals checklist, for example, the two agents in State A gave top and next-to-top priority to installation of new practices.

> Because I have been with the unit only a short time, I feel that these sessions helped me to pull together the bits and pieces of my job and look at it in a broad context. Many definite practical and/or technical suggestions were also beneficial to enabling me to perform more efficiently.

Once again, however, a number of training needs were reiterated in the questionnaire. In addition to specific, technical matters, the following comment of a staff member is especially significant in view of the excessive turnaround tune in State A and the extension of their service to all school districts:

> (Additional areas): Discussion of objectives and methods for reaching these objectives by project states. What are the major problems facing project directors? Do the project directors see "over-run" of their existing systems? What methods are being utilized to determine if educational information utilization really does make a difference?

The need for more sharing of experiences and ideas among the three states was voiced by another staff member:

> The more ideas we can exchange between now and the project's end, the more successful will be our projects, and the greater the chance for the other states' benefiting from the work of the Pilot States.

In sum, as valuable as the individualized programs was within each state, there was continuing desire for interaction between states. Clearly, another joint training session was called for.

It is quite impossible to determine the impact of the training team on State A's project on the basis of our second goals survey conducted after the training visits. The simple reason is that neither of the field agents checked any of their goals as difficult(with the exception of a single "lowest priority" goal). The same was true of the acting project director, who was also in charge of retrieval: nothing, it appears, had given her any difficulty. The nominal project director and the lower level retrieval staff members were somewhat more open about problems. However, only a few problems were indicated and hardly any were "most difficult." In general, then, the State A project was well satisfied with its work. While a number of problematic goals had been expressed in our first goals survey in State A, the comments of the staff about training do not warrant the conclusion that the training team had been responsible for solving these problems. What this analysis suggests, then, is that the training team was unable to bring anything very new to the State A project, with the exception of the newer staff members who gained a better picture of the overall project during the team's visit. Whether this was owing to State A's superior knowledge of retrieval and dissemination or to their imagined self-sufficiency is impossible to determine. One thing that can be said with some assurance is that the training team was not perceived as being essential to the improvement of State A's operations. Since much the same attitude was expressed toward the formative efforts of the evaluation team (see Appendix "Formative Evaluation -- An Exploration with Case Materials"), it may have been impossible for the training component to have had much effect in State A regardless of the quality of their efforts.

* * *

Before proceeding to the third training session, it is important to report additional evidence of the training team's impact on field agents. The evaluation team distributed a one-page questionnaire to the field agents about a month after the second round of training. This questionnaire posed the following question: "How would you rank the following influences in helping you to learn how to be a field agent and how to do your job better?" A list of ten possible influences was provided, and the ways in which the agents ranked these influences are shown in Table 11.3.

The average rank overall for the training team and its program was 4.3. This would seem to indicate a moderate level of impact. There was considerable variation between the states, however; and if the rankings of State A's agents are set aside, then the training program would rise considerably in average overall rank. In State A, the training program was ranked quite low by agent A-1 and moderately low by agent A-2. In the other states, one agent placed the program in second place, two in third place, one in fourth place, and one in fifth place -- which yield an average rank of three in States B and C combined.[1]

The situation in State A confirms our earlier observations of the training team's actual standing in that state. It seems clear that greater strain was experienced in State A's relations with training than in the other two states. As noted above, this may not have been due so much to the team's activities in State A as to the attitude of State's A staff toward outside intervention of any sort, for the field observer and the reports of the evaluation team were also ranked lower than elsewhere. Eliminating State A from our calculations, it appears that the training program was considered quite helpful.

---

[1] The dismal showing of the evaluation team's statistical reports to the states is discussed at length in Appendix J, "Formative Evaluation." Clearly, the major formative contribution of evaluation at this point had been made through the observers.

Table 11.3

RANKINGS OF TEN SOURCES OF HELP FOR THE FIELD AGENTS*

	Ave. rank overall	State A			State B			State C			
		FA's			FA's			FA's			
		1	2	Ave.	1	2	Ave.	1	2	3	Ave.
Advice and suggestions from the retrieval staff	3.1	4	2	3.0	1	2	1.5	1	7	5	3.6
Help or suggestion from the project director	3.3	2	1	1.5	2	2	2.0	7	2	7	5.3
Advice or help from the field observer	3.8	6	8	7.0	3	1	2.0	2	5	2	3.0
Trial and error in dealing with clients	4.1	1	6	3.5	10	1	5.5	9	1	1	3.6
Discussion of my role with other field agents	4.1	3	3	3.0	6	3	4.5	8	4	2	4.6
The training team and their program	4.3	8	5	6.5	5	2	2.5	4	3	3	3.3
Advice or help from other colleagues	4.5	2	--	2.0	8	1	4.5	3	9	4	5.3
Literature that I have read on dissemination	6.1	5	5	5.0	9	2	5.5	5	8	9	7.3
Advice from clients	6.3	7	7	7.0	4	2	3.0	6	10	8	8.0
Reports from the evaluation staff in New York	8.3	9	9	9.0	7	3	5.0	10	6	6	7.3

---

* The question was: "How would you rank the following influences in helping you to learn how to be a field agent and how to do your job better?" (May, 1971)

It appears that an outstanding benefit of the on-site training had been increased communication within the state projects. Many of the positive comments of the state personnel could be interpreted in terms of this somewhat unanticipated function of the training team's visits. Given the dispersed character of the projects (see Chapter 9), this was a highly important function, and the training team should receive a good deal of credit for its fulfillment.

A number of training needs persisted beyond the site visits, however. In particular, there was widespread interest in more sharing of experiences among counterparts in the different states. A third training session, therefore, was designed to bring all of the participants together once again.

The Third Training Session

Preparation

Following the second training session in State A, a meeting was held for project directors, evaluation team and USOE representatives in Chicago (May 24, 1971). The purpose of this meeting was to assess the progress of both training and evaluation, and to develop plans for the third training session.

One significant outcome of this meeting was the first formal link between the evaluation team and the training team on a formative level. It was agreed that the evaluation team would prepare a list of specific training needs and forward them to the training team for refinement and distribution to trainees in the form of a checklist. The responses were to be transmitted directly to the training team. A short time later the evaluation team conducted its second survey of goals. A list of the "most important" goals which had given the project staff "most difficulty" was drawn up and forwarded to the training team.

Soon thereafter (August 7 and 8, 1971), the evaluation staff met with field observers from all three states and, at the suggestion of the USOE project officer, elicited further recommendation for training from the observers. Recommendations emphasized the significant differences between the three states along the lines discussed above. The evaluation director then visited the training managers (August 9, 1971). The following areas of needed training were discussed according to a feed-back letter from the evaluation director to the field observers:

> Training for project directors, especially in improving relations with the SEA; training field agents in group processes, public relations, setting up self-renewal structures, understanding the systemic barriers to innovation in education; keeping the staff up to date on recent developments in education; providing self-training manuals and instructional techniques to the states; providing for inter-visitation of field agents; sensitizing the staff to the importance of validated information and the ingredients of good, generalizable research; bringing in Hoover to make a presentation on ERIC; informing the staff about the array of uses for audio-visual equipment and materials in their work.
>
> As for instructional approaches, we discussed the feasibility of having each field agent present something that he has done well, and even assigned themes to each agent. They also liked the idea of a general planning session at the very beginning of the next training session for approval of the program and revisions. I pushed the notion of providing materials on a table outside the meeting rooms so that the participants would browse and hopefully subscribe to certain publication (e.g., Education USA), which works so well at regular professional meetings.

Of the dozen or so specific recommendations contained in this note to the field observers, a training team sought to implement about five. This once again indicated a high degree of responsiveness to feed-back in the planning of subsequent training sessions. (We never expected the training team to uncritically adopt the suggestions made by the evaluation team, for we were aware of their specialized knowledge and wished to preserve their own integrity in planning. Therefore, at no time did we signify to the training team that our recommendations were inviolable; in fact, we tried to reassure them on several occasions that they would not be judged unfavorably for failing to adopt our recommendations -- unless, of course, subsequent events in the field proved us to be correct and the training team wrong.) Several months later, the evaluation team combined the responses to the training needs survey with those to the "difficult goals" survey into a list of outstanding training needs. Since this list contains the best summary of the states' continuing needs and problems after about a year of operations, it is presented in Appendix of this report. Future project directors would do well to study these needs.

Prior to meeting with the evaluation director, the training team had made site visits to the three states for the purpose of gaining further insight into training needs. On June 30, 1971, three trainers went to State C for three days. They visited field agents, the state board of education, retrieval staff, two state specialists in the state department of education and an intermediate education unit. On July 6, 1971, the training team spent three days on another site visit to State B. The trainers held a workshop and discussions with the two field agents and also accompanied them on their rounds. Visits were made to four school buildings and to four superintendents, and meetings were held with retrieval staff and the project director. In order to better assess training needs, several conferences were held with the superintendent of an intermediate school district in which one of the field agents operated. On August 2, 1971, the trainers visited State A. They met with all project personnel and with an SEA administrator, and attended a meeting of administrators and teachers who were initiating a detention program. They also visited an assistant superintendent of a target school district. Further, they were able to observe a meeting in which a communication specialist explained the dissemination program to local administrators and distributed samples of available resources. Unfortunately, the details, purposes and outcomes of these site visits were not adequately documented to assess the impact of the visits on the format or content for the third training session.

The training director provided the following list of objectives for the third training session after the meetings had been held. Those items starred (*) are identical to items in the checklist of training needs which had been mentioned by the trainees themselves before the meetings.

In planning the third training session, the training team was cognizant of:

1. The expressed concerns of the trainees gained through the training needs questionnaire.
2. The comments and recommendations made by the training team after visiting the sites.
3. The comments and recommendations made by Dr. Sam Sieber in August at the meeting with (director of training).
4. The telephone conversations with Dr. John Coulson (USOE) and the conferences held at Silver Springs, Maryland, September 12 and 14.

The over-all objectives were:

*1. Know the expectations of USOE for the projects.

2. Learn to know the operations of the three states by seeing the forms and studying the case studies.

3. Provide material and information to alleviate the expressed concerns in the questionnaires.

Objectives for all three groups:

*1. Know the operation of the ERIC Clearinghouses; the procedure for screening information for ERIC.

*2. Know the availability of resources in addition to ERIC.

3. State some of the changes and studies being conducted by U.S. Office of Education pertaining to ERIC.

*4. Be aware of how "good" some of the recently published research in education is.

*5. Find criteria for screening the abstracts and alerting the trainees on the dangers.

*6. Learn procedure for utilizing education research.

*7. Discover additional ways to motivate clients to utilize the print-outs.

8. Discover how to classify the abstracts into research and nonresearch categories.

Objectives for the Retrieval people:

1. To answer the problems submitted to (training specialist in retrieval).

*2. To develop a check list for the information retrieval and dissemination function.

3. To develop a manual of operational procedures.

4. To establish written policies for the various functions.

5. To develop approaches to selection of plausible alternate descriptors.

6. To search portions of the ERIC file which existed prior to the addition of a given descriptor to the thesaurus.

*7. To learn abstracting and indexing procedures used by the ERIC Clearinghouses and relate these to retrieval activities

8. To learn the fundamentals of symbolic logic for problem statements.

Objectives for the Project Directors:

Several project directors were aware of the work of a consultant and suggested he be contacted to review his project. He was given the following to review with the project directors.

How he keeps his people informed of new innovations.
How they "sell" the product to the school systems.
How he motivates his staff.
The types of in-service meetings he holds.
How he does a self-evaluation on his project.
How he recognizes expertise on his staff.
How he keeps aware of the entire operation of his project.
How each person knows and practices his role.
How he evaluates the efficiency of his employees.

Objectives for the Field Agents:

*How field agents in other states are operating. A consultant's presentation was to:

*Help clients understand or interpret information.
*Help clients translate research into action alternatives.
*Help clients select appropriate solutions.
*Assess the impact on clients, and evaluate the services given.

Dr. Lionberger's presentation and discussion was to:

Apprise project personnel of the multiplicity of conditions which influence the successful use of scientific information by user clienteles.

Apprise project personnel of some key variables, particularly those relating to the informational system, that enhance or impede information transfer and use.

Provide a framework within which to meaningfully discuss problem issues encountered by project personnel in their work as information agents.

In examining these goals with reference to those indicated by the trainees themselves as "needs" (Table 11.4), we found that the training team relied most heavily on the checklist for field agents. The objectives for directors indicated some weakness in their own expression of needs, which tended to be oriented toward subject-matter rather than toward operations and management of the project. This may explain why the training team seems to have ignored the items checked by directors.

TABLE 11.5

GOALS FOR TRAIN SESSION III IN COMMON WITH MAJOR TRAINING NEEDS

	Number	In Common	% in common
Overall Objectives	3	1	33.3
Objectives for all groups	8	6	75.0
Objectives for Retrieval	8	2	25.0
Objectives for Directors	9	0	0.0
Objectives for Field Agents	8	5	62.5
Total	36	14	38.8

The Training Session

On October 12-15, 1972, a Third Training Session was held at a central location. And for the first time, the training team had reached outside of its own state for consultants. Two of these consultants were brought in as a direct response to needs expressed by field agents. Another was a direct response to the needs of retrieval personnel for critical guidelines in the screening of printouts. Hoover was directly connected to the ERIC system and was able to respond to questions concerning the Clearinghouses.

The format still relied heavily on the lecture method with no opportunity for open discussion, that is, discussion which is evaluative and formative with respect to the format of training and participant satisfaction (see Table 11.5).[1] Some of this formative dialogue took place informally, however. Also, there was an increase over previous sessions in directed learning experiences (problem solving, case study sharing, etc.) especially with respect to the retrieval staff.

TABLE 11.5

METHODS OF TRAINING IN THE THIRD SESSION

Method	Field Agents	Retrieval	Directors
Lecture	51%	43%	60%
Directed Experience	28	49	16
Directed Discussion	21	8	24
Open Discussion	--	--	--
	100%	100%	100%
Number of hours	(21.5)	(18.5)	(8.5)

An addition to the schedule was a presentation on means of identifying innovative types of school personnel. This session would have approximated an open discussion format, but the introduction of this presentation reshaped the meeting into guided discussion which was largely dominated by members of the training team.

---

[1] Ten minutes were set aside for this purpose at the very beginning of the sessions, but the evaluation team had to use this time for a before-measure. Such sessions were not held during the program that ensued.

Evaluation of Session

Before the training session, the evaluation staff identified the training needs of each participant as indicated in the training team's survey. These needs were then listed in a special questionnaire for each project member. The questionnaire asked them to signify for each need their present level of effectiveness and also their hoped for level of effectiveness after training on a scale from 1 to 9. In addition, they were asked to volunteer "the five most important areas of expertise in which you would like to receive training assistance from this training session," and then to indicate for each area their current level of effectiveness after training. After the session was over, the same list of needs was submitted and new levels of effectiveness were solicited. In addition, the participants were asked to rate each of the sessions which they attended according to relevance and involvement. The following conclusions were derived from these data.

State C's director was most critical of the sessions in terms of both relevance and involvement (scores of 4.5 and 3.2, respectively, on a 9-point scale). The other directors rated the sessions considerably higher. State A's director gave mean ratings of 7.6 for relevance and 6.8 for involvement; and State B's director gave mean ratings of 7.4 and 6.0.

There was also some variation among retrieval personnel, with scores ranging from 6.5 to 8.4 for relevance, and from 4.1 to 8.1 for involvement. Least variation occurred among field agents on both dimensions, with scores ranging from 5.2 to 6.6 for relevance, and from 5.2 to 6.7 for involvement.

(There were about the same number of retrieval and field agent personnel in attendance.) This suggests that the field agents had more in common in terms of training needs.

Project directors tended to rate the sessions lower on involvement than either field agents or retrieval personnel (5.1 vs 6.0 and 5.7, respectively); but this was mainly due to State C's director. Their relevance scores, on the other hand, fell between those of field agents and retrieval personnel. Sessions which were rated highly relevant (7-9) by project directors were:

*Bringing Us Up-to-Date (evaluation director)
Goals of the NCEC (USOE Project officer)
Available Resources (ERIC director)
Using Guidelines for Research (researcher from Columbia University)

In short, the project directors were mainly interested in the contributions of outside consultants and USOE personnel.

Retrieval personnel tended to rate the sessions higher on relevance than did either project directors or field agents (7.3 vs 6.2 and 6.0, respectively). Their involvement fell between field agents and project directors. Sessions which were rated highly relevant by retrieval staff were the following:

*Finding Solutions (trainer)
*Continued Work on Manual (trainer)
*Bringing Us Up-to-Date (evaluation director)
*Discussion (trainer and university researcher)
Using Guidelines for Research (university researcher)
Available Resources (ERIC director)
San Mateo Project (outside consultant)

Here we see that the two trainers were as likely to be mentioned as outside consultants. Thus, it appears that the training team was especially strong

---

*Indicates sessions which were also rated high (7-9) on involvement.

in helping retrieval personnel.

Field agents tended to rate the sessions lower on relevance than did either project directors or retrieval staff (6.0 vs 6.2 and 7.3, respectively). This confirms our qualitative observations of the sessions. Later we indicate the kinds of experiences which the field agents desired but found insufficient in the training sessions. Only three sessions were rated highly relevant by the field agents, and only one of these was conducted by a trainer:

*Case Study Sharing (trainer)
*Goals of the NCEC (USOE project officer)
*Bringing Us Up-to-Date (evaluation director)

(In view of the consistently high ratings by all three groups of the presentation made by the director of evaluation, the reader might wish to refer to Appendix G, "Developing a Strategy Based on Particular Clients and Their Setting," which comprised the major portion of his presentation.)

With respect to the before-after scores on effectiveness (scale of 1-9): field agents showed a mean increment of 2.5 on their total needs (all needs which they listed in the training survey, regardless of level of importance); project directors, 1.5; and retrieval personnel 2.8. These findings comparing the three groups are consistent with respect to judgements of relevance: retrieval personnel gained most, field agents next, and project directors least.

When interpreting these mean increments in "effectiveness," it should be realized that a "halo effect" may have operated insofar as the participants were seeking to express their appreciation for the training team's efforts and cordiality by insuring that their "after" scores were higher than their "before" scores. This comment is not meant to disparage

---

* Indicates sessions that were also rated high (7-9) on involvement.

the work of the training team, but to point out a common measurement problem in before-after tests of this sort. As one field agent wrote to us about his post-test, "In re-checking the questionnaire I determined that on (four) questions I compared in terms of the Conference contribution rather than my present level of effectiveness." Another field agent confided in a field observer that he checked his post-test questionnaire in terms of his desired level of effectiveness rather than his actual effectiveness. Thus, these statistics should not be used as the sole basis for evaluation of the training session.

In addition to these measures, comments were solicited from participants about ways in which training might be improved:

> You have been in the business now for around a year and we have quizzed you a number of times on your training needs. We feel you might now be able to tell us some of your suggestion for how you would like to be trained. How would you have strengthened or improved the third training session?

All three directors suggested the need for more discussion, with special emphasis on the sharing of knowledge gained from their own experience. The State C director was most critical and suggested a technique for encouraging creative interchange. Most retrieval personnel felt the third training session was an improvement over the first, but were not as satisfied with formal sessions (with the exception of two such sessions), preferring instead more work sessions with certain trainers and, hopefully, a sharing session with field agents.

Field agents seemed to have been shortchanged. All five who responded to this question indicated a need to share their experiences. One noted: "...I feel that we could be of more help to each other than outside consultants could ever be." Although consultants were rated well (with one exception), it is possible that their presentations were too abstract for the agents. The agents wanted to discuss concrete, day-to-day problems. Here are some typical comments:

> It was my impression that several of the speakers were not clearly informed as to our methods, mode, and experience obtained in the project...the Field Agent sharing session by (trainer) was of great value...Regarding a new training session: discussion of techniques of field agentry, visitations to agents, by agents, to inspect or observe similar problems and methods of operations, more time to jointly share experiences and to look at them from all aspects...
>
> This was undoubtedly the best training session (the training team) has produced. My suggestion is that the more contact we can have with people of like responsibility the more we will benefit That's why the interchange between field agents is good. The presentations by (several individuals) were good, but I wonder how valuable the same amount of time would have been spent with "Field Agent" type people -- possibly on case studies on in the field someplace.
>
> To improve the third training session I would have allowed more time for the field agents to talk together...It might be well to cut down on the structured sessions and put more emphasis on the agents, project directors and retrieval people querying each other on the how, when and what of their operation.

On the whole, then, we find some of the same deficiencies in the third training session as occurred earlier -- failure to deal directly with managerial issues; failure to provide self-instructional materials for working between sessions; failure to provide the field agents with an open format for sharing experiences and solutions (although the "case-study" session was well liked, not nearly enough time was set aside for it); and insufficient guidance for field agents in the output interaction phase.

The Training Model

In the broadest possible terms, three training models can be fruitfully distinguished. The Self-Development model is oriented toward sharpening the abilities already possessed by participants. Extensive direction is viewed as interfering with self-development; therefore, a very loose structure is provided along with certain self-training tools. The locus of control in such a model is, of course, the participants.

The Injection model assumes that the participants are to be injected with knowledge or certain skills. Lectures and controlled experiences are the hallmark of this model. Since the locus of control is the trainer, participant comments are rarely taken into account in designing the training format.

Finally, there is the Negotiation model wherein the success of the program is viewed as depending on coordination of training with the needs of participants at different points in time. The training format is flexible in order to adapt it to emerging needs. The control of format, content, etc., is shared between participants and trainers.

It would be unusual for as diverse a team as the Pilot State training project to conduct all of its training within the framework of a single model. And indeed, the orientation of the team's approach seemed to vary over time. The first training session tended to resemble Model II (Injection) in format. The second training session tended to follow a format similar to Model I (Self-development). The third training session appeared to follow Model III (Negotiation) in its preparation, but Model II (Injection) in its actual performance and impact. Moreover, by virtue of the fact that administrative structures varied between projects along lines of authority, expertise in skill areas, and so forth, training needs varied accordingly. Finally, certain skills tend to be process-oriented (e.g., field agent communication skills), while others are more content-oriented (e.g., retrieval use of the ERIC thesaurus). The training team tended to be strongest in the area of content, and was able to isolate specific retrieval skills and to focus training experiences toward their mastery. Process problems tended to remain on an abstract level, however, and therefore training experiences lacked clarity and focus.

In order to see how the trainees themselves viewed the program in terms of these three models, a questionnaire was prepared (see next page). The responses do not necessarily reflect the intent of the trainers. Rather, the reports of the staff are from their own perspective. However, it may be that cooperation or resistance to training will depend to a large extent on the trainees' perception of what the trainers are doing. Table 11.6 shows the responses of the staff to our questionnaire.

The State B director viewed the overall training program as Model III (negotiation), reflecting the generally more open relationships attained with the training team. Directors in States A and C saw the overall training format as Model II (injection), although the director in State A pointed out that needs assessment (an aspect of negotiation) improved considerably. The State C director confirmed earlier observations that, although the two on-site visits were more along the lines of Model III, "...once the session began, some movement toward II was very evident -- particularly the lecture and controlled experiences..."

In general, the retrieval personnel saw the training teams as having started out highly structured and then moving toward a posture of increased negotiation. The field agents occupied the least defined and perhaps most discussed role in the program. All concerned reiterated the importance of this "linking agent." Yet overall, as we have seen, the field agents came away from training with the least direct, specific help related to their day-to-day activities. One agent volunteered that the

THREE MODELS OF TRAINING

I - SELF DEVELOPMENT	II - TRANSFORMATION (INJECTION)	III - NEGOTIATION CONCEPT
Orientation: Program success is primarily dependent on abilities already possessed by participants. Extensive direction tends to interfere with self-development.	Orientation: Program success is primarily dependent on amount of control (training) given to participants. Participants must be injected with knowledge or skills.	Orientation: Program success is primarily dependent on coordination of training input with program needs. This needs constant monitoring and adjustment.
Methodology: Very loose structure. Provide learning tools at the elbow of the participant. Little intervention.	Methodology: Tendency toward inflexible format for training. Lecture and controlled experiences. Tendency toward coercive contracts (i.e. use of group pressure on appeals for cohesion).	Methodology: Flexible training format with responsiveness to participant input. Extensive soliciting of participant needs and provision of training experiences fitted specifically to needs. Participation approach.
Locus of control: Program participants are given majority of power but without solid encounter of expertise from trainers.	Locus of control: Trainers maintain control. Participant comments are accepted and even elicited but rarely have any impact on the training format.	Locus of control: Control of format, content, etc. of training is shared between trainers and participants.

(I = Self Development, II = Transformation, III = Negotiation)
PLEASE CIRCLE ONE OF THE THREE TYPES OF TRAINING MODELS YOU FELT WAS USED BY THE TRAINERS IN THE FOLLOWING:

First Training Session (centralized) (I) (II) (III) NAME ____________________
Second Training Session (on-site) (I) (II) (III) State ____________________
Third Training Session (centralized) (I) (II) (III) Job Title ____________________
OVERALL TRAINING MODEL (I) (II) (III)

COMMENTS: ____

____

TABLE 11.6

THE NUMBER OF PROJECT DIRECTORS, RETRIEVAL PERSONNEL AND FIELD AGENTS WHO VIEWED THE TRAINING SESSIONS ACCORDING TO THREE MODELS OF TRAINING

	Models of Training		
	Self-Development	Injection	Negotiation
Project Directors (3)			
Session One	-	3	-
Session Two	-	-	3
Session Three	-	2	1
Overall training	-	2	1
Retrieval Personnel (4-6)*			
Session One	-	3	1
Session Two	1	1	3
Session Three	-	1	5
Overall training	-	1	3
Field Agents (5-6)*			
Session One	-	5	-
Session Two	2	2	2
Session Three	1	2	3
Overall training	-	5	1

*Number of trainees varied by session due to absences.

"training period was probably as much a learning experience for trainers as trainees."

One agent rated the on-site visit as Model III (negotiation), but felt that the formal training phases of these visits took on the features of Model II (injection). He questioned the role of the trainers as "injector(s) of commonalities and known dissemination factors." Another felt that the on-site visit "was the most effective because of the opportunity to involve some of the clients as well as the agents." And another saw the overall training model as being near Model II "with some leaning toward (Method) III..." Overall, the training tended to reflect Model II (injection); and this was especially true of the first session.

Summary

In a sense, the trainer is very much like the field agent. He should bring expertise to the situation, be skilled in rapport building and problem negotiation, and try to meet the clients' needs on a down-to-earth basis. He is the "linking agent" between theory and practice. It is especially in the area of problem negotiation that the trainer's mettle is tested. Here he must demonstrate the ability to hear and respond to the needs of the client (trainee), supply necessary expertise in guiding the client toward useful solutions, and follow-up in order to ensure valid and meaningful changes.

It would be naive to assume that the only place training occurred in the Pilot State Dissemination Program was within the confines of training sessions. There are many indications that when conference sessions became too restrictive, participants met other places to meet communication needs. In general, the formal sessions tended to be subject and trainer-centered rather than participant-centered; that is, the format was only minimally negotiable within the conference. The agreeable nature of the trainers tended to overshadow the fact that the sessions remained generally inflexible.

There was, however, a sincere effort made to modify formats between training sessions. The adequacy of those formats to the needs of the participants, however, remains in question. The information needs of the retrieval staff seemed to have been met quite well, and special commendations are in order for the two retrieval-trainers But the needs of field agents, and of some retrieval people arising out of structural (administrative) difficulties, were rarely dealt with effectively.

Of special interest was the second training program. These sessions represented an attempt on the part of the training team to tailor training methods to the needs of personnel. The difficulty in evaluating this session lies in the fact that preparatory on-site visits for the purpose of needs assessment included a great deal of informal training. Elements of informality tended to merge with assessments of the total training session, therefore. Overall, on occasions of formal opposed to on-site training, the format could generally be described as inflexible. However, there was significant variation by role. Retrieval personnel perceived the trainers as being most negotiable, directors perceived them as less negotiable, and field agents perceived them as least negotiable. This datum is disappointing inasmuch as emphasis in the Pilot States Dissemination Program was on developing and demonstrating the validity of the field agents role.

The greatest strengths provided by the training team were in the area of retrieval. As perceived by field observers and retrieval personnel, the retrieval specialists most nearly met the problem-oriented needs of retrieval staff and provided the necessary expertise to allow for functional problem-negotiation with the staff. One of these specialists, a former SEA retrieval staff member, was the only trainer with expertise directly related to the tasks of the Pilot States Dissemination Program. All others represented expertise which, at first, seems analogically related, but over time seemed less relevant. In particular, the meaningfulness of the analogy between the farm extension agent and the educational extension agent became less and less supportable as the projects encountered the complex administrative entities represented by school districts and state agencies.

The proposal of the training team stressed the validity of the farm-school analog, and USOE in funding the proposal implicity supported that assumption. By now, it should be apparent that expertise gained in agricultural extension work, although entailing the same linking function, requires significantly different skills and levels of sophistication. The variables related to growing more and better corn are certainly more easily isolated and manageable than those related to raising children. Engaging in problem-negotiation with a single-owner farm or even a group of farmers requires less human relations sophistication than negotiating on a variety of administrative levels in an ever-changing complex system such as a school district. (For further discussion of these points, see Chapter 2.)

Despite extensive needs-assessment between training sessions, the actual sessions tended to be seen by field agents as inflexible. The third training session, in particular, presented a situation in which the trainees probably represented greater expertise than the trainers, and despite requests for more time to discuss mutual problems, several field agents experienced frustration.

Since the problems of field agents, retrieval personnel and project managers have been delineated and summarized in the earlier chapters of our report, it would be redundant to mention them here in relation to deficiencies in training. More important is the question of the extent to which a training program can be successfully mounted to deal with a relatively unique constellation of roles. While feedback from the participants becomes an obvious necessity, a great deal depends on the validity and clarity of such feedback. There is a good deal of evidence throughout our report that the Pilot State personnel themselves were not always aware of their problems and needs, however, and that in certain cases they were reluctant to share their experiences openly with the trainers. The fact that they were simultaneously being evaluated -- not only by the evaluation team and USOE, but by their own peers and superiors in the SEA -- means that they were under considerable pressure to make a good impression. No doubt these pressures contributed to problems of communication with the training team. Taking all of these factors into account, it would appear that the training component exerted itself to the fullest against odds which were bound to produce some frustration. The restrictions of vision that were imposed by the farm-school analog and by a certain effort to appear self-sufficient as a training component (which may also have been partly due to their eagerness to impress their multiple evaluators) added to these handicaps.

Speaking summatively, therefore, we would conclude that the outcomes of training were _moderate_ (with respect to retrieval) to _negligible_ (with respect to field agents and project directors.) With regard to feedback efforts, the training team should be seen as having been _highly energetic_; but owing to external and internal handicaps, only _moderately responsive_. Finally, in terms of the model that infused their activities, we would conclude that _considerable_ versatility was shown in tailoring training to the desires and abilities of the retrieval staff, but only _moderate_ versatility in dealing with field agents and with project directors.

PART VI.

OUTCOMES OF THE PROGRAM

CHAPTER 12

OUTCOMES OF FIELD ACTIVITIES

Having investigated the operations of a dissemination-extension system in great detail, we are now prepared to assess the impact of the dissemination projects on the educational personnel in the three states. The research reported in this chapter is based on our survey of clients of the information service.

As mentioned earlier, the survey was conducted over a period of about five months (approximately a year after the service had been inaugurated), with questionnaires being mailed to users of the service three weeks after their having received information or assistance. This time-lag was deemed necessary to insure that clients would have a reasonable period of time to appraise and utilize the information.[1] We assured the clients in our first cover letter, however, that if more time were needed, we would be happy to wait for the questionnaire until they had more experience with the information.[1] At intervals of three weeks thereafter, a follow-up questionnaire was sent with a letter reiterating our willingness to wait if more time was desired. After a lapse of about two months since the first mailing to a client, we requested a non-respondent to fill out the questionnaire in terms of the information's probable future value, if necessary, and to return the instrument as soon as convenient.[2] Finally, when our two follow-up questionnaires failed to elicit any reply, we sent a one-page form to collect certain background information for the purpose of response-bias analysis. We also asked four evaluative questions about the service in this one-page form. In this section, therefore, we occasionally report the results from the combined questionnaire and single-page follow-up.

---

[1] We rejected the idea of enclosing the questionnaire with the information for several reasons: the respondent might lose or forget about the instrument by the time he had utilized the information; he might return the instrument prematurely; and he might be cued to certain aspects of the service or of our evaluation by browsing through the questionnaire before trying to use the information. For these reasons, we would caution future projects against enclosing evaluative forms with the information package.

The combined response rates were the following: State A, 72 per cent; State B, 93 percent; and State C, 86 percent. Response rates for useable questionnaires were: State A, 61 percent; State B, 85 percent; and State C, 77 percent.[3] These rates exceeded our expectations, and were partly owing to telephone calls by field observers urging the most tardy respondents to reply. When examining the backgrounds and positions of questionnaire respondents and non-respondents (using the one-page questionnaire to represent the latter), we found only slight sample biases in school position and, correlatively, level of educational attainment. The difference between the combined sample and the questionnaire sample within any sub-category of background or position did not exceed three percentage points.

---

[1] Follow-up letters are in Appendix B.

[2] We asked them to indicate on a special form whether the questionnaire was being answered in terms of either past or anticipated value of the information or assistance. Only three percent of all clients whose questionnaires were eventually returned indicated that their responses were made in terms of the future. Because of this low percentage, we feel safe in reporting results without making special allowance for these future-oriented replies.

[3] For detailed statistics on response rates in the three states, see Appendix L.

In all three states there was a slight tendency for non-respondents to value the service less than respondents, as one would expect. But because of high response rates, this bias does not pose a problem. Once again, the difference between the combined sample and the questionnaire sample within any sub-category of evaluation of service does not exceed three percentage points. In short, the clients represented by our survey would appear to be highly representative of all clients for the period covered.

First, we report levels of subjective and objective utility for each of the three states. We then turn to an analysis of possible effects of interaction with field agents.

Subjective Appraisals

Several questions sought to elicit the clients' evaluation of the service. One question had two parts, one referring to information and the other to personal assistance:

How about the practical value of the information or assistance?

	Information (abstracts, articles, packages, etc.	Personal Assistance (of information agent or other consultant)
Very useful	____	____
Moderately useful	____	____
Only slightly useful	____	____
Not useful	____	____

Because this question was also asked of non-respondents by means of our single-page follow-up, we are able to report appraisals of information and assistance for the great majority of clients in each of the three states over the five-month period of our survey. Table 12.1 presents the responses to this two-part question.

The three states evoked about the same level of approbation from its clients, with State A yielding the highest proportion of satisfied clients. Of greater interest, however, is the much larger proportion of clients who valued assistance as contrasted with information in all three states. Approximately a third of the clients felt that the information was "very useful" while almost twice this proportion felt that personal assistance was "very useful." Perhaps more than any other figures in our report, these reflect the significance of personal assistance to local educators: interpersonal contact is clearly more highly valued than printed information--or to use our terminology in the Introduction, the Cooperator strategy is more highly appreciated than the Rational Man Strategy. But was this true of all levels of educational personnel? Let us turn to the response of clients in different positions.

TABLE 12.1

PROPORTION OF CLIENTS WHO SAID THAT INFORMATION
OR ASSISTANCE WAS "VERY USEFUL"*

	State A	State B	State C
Information (abstracts, etc.)			
Very useful	38%	28%	30%
Moderately useful	31	49	42
Only slightly useful	14	16	21
Not useful	27	7	7
	100%	100%	100%
N	(188)	(363)	(190)
Personal Assistance (of information agent or other consultant)			
Very useful	66%	61%	56%
Moderately useful	17	24	28
Only slightly useful	8	9	11
Not useful	9	6	5
	100%	100%	100%
N	(78)	(167)	(86)

*Includes respondents to one-page follow-up questionnaire.

A major objective of the Pilot State program was to provide a service that was tailored to the needs of the particular client. Since the needs of classroom teachers are often different from those of administrators, one means of determining the extent to which this goal was accomplished is to see if teachers and administrators were equally satisfied with the service. Table 12.2 shows the proportion of clients in different positions (teachers, administrators and SEA staff) who felt that the information was "very valuable."

Only in State A does there seem to be a discrepancy between the judgements of teachers and administrators. Half of the teachers felt that the information was "very valuable" whereas only slightly more than a third of the administrators did so. We saw in Chapter 7 that teachers were no more likely to receive a comprehensive search than administrators; thus, this factor cannot account for the discrepancy. Perhaps we are confronted with different levels of initial expectations among teachers in the three states. If the teachers in State A were less aware of educational resources than the teachers in the other states, they might have been more appreciative of the information delivered to them. Inasmuch as teachers in State A exhibit somewhat lower levels of educational attainment than teachers in the other states, this explanation might have some validity.

With the exception of teachers in State A, it seems that educational personnel at all levels were equally satisfied with the information they received. (The small numbers of SEA personnel in Table 12.2 do not warrant definite conclusions. It appears, however, that they were about as satisfied as local teachers and administrators.) In sum, the information seems to have been equally well received by personnel at all levels, suggesting that individualization of the service by professional position was a successful outcome of the Pilot State Program.

How about judgements of assistance according to different positions? Table 12.3 presents the relevant statistics; and once again we

TABLE 12.2

PROPORTION OF CLIENTS WHO SAID THAT INFORMATION WAS "VERY USEFUL," ACCORDING TO PROFESSIONAL POSITION

	Percentage "Very Useful"		
	State A	State B	State C
Teachers	49% (47)	29% (105)	22% (58)*
Administrators	36% (75)	30% (169)	26% (74)
SEA personnel	27% (15)	31% (13)	35% (20)

*Numbers in parentheses are the bases of percentages.

TABLE 12.3

PROPORTION OF CLIENTS WHO SAID THAT ASSISTANCE WAS "VERY USEFUL," ACCORDING TO PROFESSIONAL POSITION

	Percentage "Very Useful"		
	State A	State B	State C
Teachers	63% (19)	58% (52)	52% (23)*
Administrators	73% (26)	66% (76)	45% (38)
SEA personnel	50% (6)	57% (7)	70% (10)

*Numbers in parentheses are the bases of percentages.

find little variation between positions. (While some variation occurs between SEA personnel in the three states, the small number of cases makes it impossible to reach any conclusion on this point.) Finally, it is clear that *assistance was valued more highly than information by all three types of educational personnel*. Roughly *twice* the proportions of teachers, administrators and SEA staff who felt that the information was "very useful" in each of the three states felt that assistance was "very useful" (with the one exception of teachers in State A, who valued the information so highly). In a later section we will see *whose* assistance it was that was valued.

Another general (and somewhat leading) question sought to measure the *overall value* of the service to the clients:

> Overall, would you say that this information program is a valuable service to educators?
>
> ____ Yes ____ No ____ Don't know

This question too was asked of non-respondents to the questionnaire in our single-page follow-up. Combining both sources, it yielded the replies shown in Table 12.4. Since it is probably normal for individuals to strongly endorse a new educational service *in hopes of preventing its curtailment*, these high levels of endorsement are not surprising. Nevertheless, they do indicate a rather resounding vote of confidence on the part of local school personnel in the *idea* of a dissemination-extension system.

A final question which solicited the clients' evaluation of the service concerned the "research base" of information:

TABLE 12.4

PROPORTION OF CLIENTS WHO SAID THAT THE SERVICE WAS VALUABLE OVERALL

	State A	State B	State C
"Overall, would you say that this information program is a valuable service to educators?"			
Yes	90%	89%	86%
Don't know	8	10	12
No	2	1	2
	100%	100%	100%
N	(197)	(373)	(197)

Educational ideas may or may not be based on research. Is it your impression that most of the information or materials you received was based on:

____ Good research	____ Don't know if good or poor research
____ Poor research	____ Don't know if based on research at all

We did not expect to learn from this question whether the information was actually based on good or poor research. First, school personnel are not trained to make this assessment. Second, the format of information or materials does not allow such an assessment. Third, it is known that local educators tend to exaggerate the importance of research in the development of educational products which are brought to their attention.[1] And fourth, the very meaning of the term research varies among educational experts themselves.[1] Rather, what we sought to learn was whether clients felt that the information they received was somehow authentic. And as seen in Table 12.5, in half to two-thirds of the cases they did. This result is somewhat double-edged: on the one hand, it reflects the clients' faith in the validity of their information; on the other, it might indicate a certain naïvete on the part of local educators, a prospect which underscores the obligation of retrieval specialists at all levels to insure that the educational knowledge which they purvey is founded on something more than conventional wisdom or current fads.

---

[1] Allen H. Barton and David E. Wilder, "Research and Practice in the Teaching of Reading," in Matthew B. Miles (ed.), Innovation in Education. New York: Teachers College, Columbia University, 1964; p. 383.

TABLE 12.5

RATINGS OF THE RESEARCH-BASE OF INFORMATION

"Educational ideas may or may not be based on research. Is it your impression that most of the information or materials you received was based on":	State A	State B	State C
Good research	67%	46%	49%
Poor research	2	1	--
Don't know if good or poor research	21	32	37
Don't know if based on research at all	8	18	12
Combinations of above	2	3	2
	100%	100%	100%
N	(153)	(335)	(170)

---

[1] Sam D. Sieber and Paul F. Lazarsfeld, The Organization of Educational Research in the U.S., U.S.O.E. Final Report, CRP-1974 (Bureau of Applied Social Research, 1966), pp. 227-230.

5·5

Now let us move on to more objective measures of impact.

Actual Use

The following question was asked in an effort to gain a more realistic picture of the service's impact than afforded by subjective appraisals:

> Please describe in as much detail as possible the actual use you made of the information or assistance.

Coding categories for this question were established on an intuitive basis to approximate a linear measure of utilization. Thus, we were not so much concerned with type or scope of implementation as with whether the information or assistance actually served as a basis for action. Action needs to be defined broadly, however, for frequently information was requested for planning or proposal writing. If it seemed to have been used for these purposes, we considered that utilization had taken place, even though an impact on educational processes might not occur until much later. So that the reader will have some idea of the criteria used in coding these responses, here are some illustrative replies classified according to our accounting scheme:

1. A specific practice or program was implemented

> Assisted in implementing a new pre-school testing program (district-wide). Assisted in staff planning of curricular studies and improvements in various areas. (Principal)
>
> Used as a tool in selecting books. (District library consultant)
>
> After skimming some of the material and reading more of it more carefully, we made up our report card which uses a check system rather than a letter system. (Principal)

Actual use of behavior modification techniques in the classroom. (Teacher)

We used it for ideas for projects and classes to be given during our Earth Week (not yet given). We used it for research for students in writing reports in information writing class. (Teacher)

The information was used in establishing criteria for a counselor preparation program at the undergraduate level. (SEA specialist)

2. Vague response indicating that some implementation occurred

Teachers used specific books on a subject to identify objectives then write some of their own. (District curriculum consultant)

Used the practical ideas to give to all teachers dealing with reading difficulties. (School specialist)

I used (and am using) the material for curriculum planning. (Principal)

Helped in writing up curriculum information, especially for a middle school. (Teacher)

Programming classroom curriculum; to spice up the State Guide as it relates to the trainable child. (Teacher)

For planning in instructional programs. For using in inservice training. For use in college class. (District specialist)

3. Used for planning or proposal writing

Used to make a determination concerning further research and study in the area of merit pay for our school district. (Teacher)

Many articles were quoted in the proposal paper. Several were used in background of literature. Many statistics were used from the articles. (Director, instructional materials center)

The oral report was given to the administrators, information was used in helping us evaluate our present status and also for projections for future needs, assistance in building an I.M.C. philosophy and program for operation. (Principal)

Provided general background for revenue sharing proposal submitted to Office of Education. (SEA staff)

Collection of ideas from the material was utilized in preparation of a newly developed program. (District staff)

We discussed the information in the District Environmental Committee and tried to decide on some project that would be appropriate to individual schools and classes. Our school intends to make an outdoor learning lab--with all the help we can get we are doing this--the information received gave us quite a bit of help. My own class project has developed into an awareness of our environment project. Survival-art-appreciate of nature idea. (Teacher)

4. The material was read, but no specific use was made of it

Discussed with advisory board the theoretical information. (School administrator)

Background material now, but will place copies in curriculum library in school district. (School administrator)

Reading these materials gave me ideas and confidence in the new program of individualized instruction in grammar. (Teacher)

Had a packet on correcting reading difficulties. Compared it with information I had on the subject. Copied some materials for later reference. (Teacher)

The information gleaned from the articles is helpful as background of new programs for our media center to consider. The idea of a toy-lending library is feasible for our school. (School administrator)

Will request microfilm on several of the abstracts. (Intermediate director of environmental education)

5. Negative comment about the material

Most of the material received was not pertinent to our needs. (SEA specialist)

The material I received was very limited in nature. I received only one item of use. This is partly due to the nature of the request. I am also having real trouble finding additional information about local level government. (Teacher)

> Perused the abstracts and found them to be of little relevance to my original request. (District resource center staff)

Unless the coding of a response was clear-cut, interpretations of responses to this open-end question were discussed among the two project directors and principal investigator, whose responsibility it was for coding this question.

Relating the replies to this question (according to our accounting scheme) to the replies to the question concerning *subjective* usefulness of the information yields high positive correlations. (Gamma = .50 , .59, and .61 in States A, B and C, respectively.) We feel reasonably assured, therefore, of having managed to tap a dimension of actual use.

Table 12.6 shows the proportion of clients who reported different levels of utilization. On the whole, almost half of the clients in two states (A and C) actually implemented the information or assistance, while 37 percent did so in State B. There is little question, then, that the information or assistance provided through the Pilot State projects was often utilized for the intended improvement of education practice. Further, as was true of clients' subjective evaluation of the service, there is little variation between the three states in this regard.

The main problem with using this question as our sole measure of utilization is the large proportion of clients in each state who *failed to respond* (State A, 26 percent; State B, 14 percent; State C, 23 percent). While many of these non-respondents probably had not "used" the information or assistance, others may simply have been unwilling to take the time or effort to give an answer. Further, the brevity of certain responses may have made it impossible to detect implementation when in fact implementation had occurred. And finally, many clients simply may not have remembered how they used the information, especially if it had several benefits.

TABLE 12.6

PROPORTION OF CLIENTS WHO ACTUALLY USED THE INFORMATION

"Please describe in as much detail as possible the actual use you made of the information or assistance."	State A		State B		State C	
A specific practice or program was implemented	12%		8%		9%	
Vague response indicating some implementation	15	46%	7	37%	14	47%
Used for planning or proposal writing	19		22		24	
The material was read, but no specific use	48		54		41	
Negative comment about the material	6		9		12	
	100%		100%		100%	
N	(111)		(290)		(135)	
NA	(39)		(49)		(40)	

In anticipation of these problems, we followed-up our free answer question with a checklist of 14 possible benefits which was preceded by the following instruction:

> Perhaps there were additional ways in which the information or assistance helped you. Please look over the following list and indicate whether or not you benefited in each of the ways specified.

In Table 12.7 we have labelled each benefit according to its prime object:

staff, curriculum, self, administration, or pupils. Items pertaining to self, staff and curriculum rank high on the list of benefits, while items pertaining to pupils rank low.

This result should not be interpreted as signifying that information or assistance was of little benefit to students. It would have been difficult to assess pupil effects in the relatively short period of time which had elapsed since the clients received the information. The fact that resources for helping staff members and curriculum development were mentioned by 37 percent to 52 percent of the clients in the three states suggests that pupils will eventually be affected.

It must be remembered that the instruction in the question asked the client to reply to the checklist if there were additional ways in which the information or assistance helped them. Many who had already mentioned the benefits of the service in the preceding open-end question did not bother to reply to the checklist, therefore. Consequently, the distribution in Table 12.7 may not represent the true proportions who benefited in each way, although the rank order of frequencies is probably quite reliable.

Because a large proportion of clients who had answered the preceding open-end question did not respond to the checklist, we considered it advisable to combine the two questions into a single scale. First, an index was formed which measured the number of benefits checked by the clients (0-14). Relating this scale to the open-end question about use yielded fairly strong relationships (gamma = State A, .62; State B, .45; State C, .21. (Interestingly enough, when a sub-scale based on the number of pupil benefits was related to the open-end responses, the relationships

TABLE 12.7

PROPORTION OF CLIENTS WHO MENTIONED SPECIFIC BENEFITS OF INFORMATION OR ASSISTANCE

		State A	State B	State C
SELF	I learned something new	54%	57%	58%
STAFF	It gave me new resources for helping other staff members	49	52	51
CURR.	It helped with curriculum development	37	40	50
SELF	It improved my skills	35	24	35
SELF	It made my job easier	31	33	39
ADMIN.	It helped with an administrative problem	28	32	27
SELF	It helped in preparing a speech, report, or article	28	25	27
SELF	It helped me to have greater self-confidence	19	21	22
CURR.	It helped in developing instructional packages	18	19	21
PUPIL	Pupils learned new information or skills	15	11	18
SELF	Other school or agency personnel appreciated me more	13	16	13
PUPIL	Pupils learned faster	11	7	14
PUPIL	It helped with pupils' growth	11	4	8
PUPIL	Pupil discipline was improved	9	5	8
	N (includes NA's to entire question)	(158)	(354)	(184)

became even stronger: State A, .71; State B, .54; State C, .25. This lends considerable credibility to our open-end question since it indicates that implementation as measured there reflects pupil effects in particular.) Owing to these strong relationships, it became feasible to combine the two scales.

Our final Utilization Index gives somewhat greater weight to the upper range of the open-end responses on the assumption that a strong free answer is more valid than a strong checklist response, and also in the present case might render a checklist response unnecessary. The Utilization Index was constructed as follows:

Utilization Index	Open-end Question Re: Use	Checklist Question (Scale 0-14 Benefits)
High - 1	Specific practice or program was implemented	---
2	Vague response indicating some implementation	---
	OR	
	Used for planning or proposal writing	AND ALSO: 6 - 14 benefits checked*
3	Used for planning or proposal writing	AND ALSO: 1 - 5 benefits checked
	OR	
	No specific use, Negative criticism, or No answer	AND ALSO: 6 - 14 benefits checked
Low - 4	No specific use, Negative criticism, No answer, or All others not classified	AND ALSO: 0 - 5 benefits checked; or no answer

---

*This cutting point is above the median in two of the states. About a third of the clients checked six or more benefits in State A and B, and about half did so in State C.

The distribution of clients in each state according to this scale is shown in Table 12.8. There it can be seen that 40 to 47 percent of the clients in the three states gave strong evidence of having actually used the information or assistance which they were rendered. These proportions are of the same magnitude as those yielded earlier by our open-end question (see Table 12.6), but now all clients in the three states are classified in our index.

TABLE 12.8

DISTRIBUTION OF CLIENTS IN THREE STATES, ACCORDING TO UTILIZATION INDEX

UTILIZATION INDEX		State A		State B		State C	
High - 1		8%	40%	6%	40%	10%	47%
2		13		13		16	
3		19		21		21	
Low - 4		60		60		58	
		100%		100%		100%	
	N	(168)		(361)		(153)	

When we relate the Utilization Index to the clients' subjective appraisal of the information, we find the same magnitude of relationships as yielded by the open-end question. Thus, the Utilization Index does not sacrifice any of the validity of the open-end question. Further, the Utilization Index is more highly related than the scale of 14 benefits to subjective value. These statistics, using gammas once again as a measure of association, are shown in Table 12.9. Clearly, both the open-end question regarding use and the Utilization Index are superior to the checklist question in predicting subjective value. The main reason for using the Utilization Index, however, is that it increases the number of cases available for analysis.

TABLE 12.9

ASSOCIATION (GAMMA) BETWEEN MEASURES OF ACTUAL USE AND SUBJECTIVE VALUE OF INFORMATION*

	State A	State B	State C
Open-end question: "actual use of information or assistance"	.50	.59	.61
Checklist question: scale of 0-14 benefits	.32	.47	.52
Utilization Index (combination of above questions)	.50	.59	.70

While there is little variation between the states on the Utilization Index, when we look at the positions of the clients, certain interesting differences emerge with respect to State A. In Table 12.10 we find virtually no difference in utilization rates according to position in States B and C. This strongly suggests that our index has successfully coped with the problem of taking into account the different types of implementation engaged in by teachers, administrators and SEA staff. In State A, however, administrators at the building level were most innovative, and secondary teachers were the least innovative. More refined analysis indicates that the impressive showing for school administrators is almost entirely confined to the non-target clients in State A. Quite possibly, then, these building administrators are the "district communication specialists" appointed in State A who were using the service for their own benefit as well as for the benefit of other requesters.

---

*Subjective value was measured by the question: "How about the practical value of the information or assistance?"

TABLE 12.10

PROPORTION OF CLIENTS WHO USED THE INFORMATION (SCORES 1-3 ON UTILIZATION INDEX), ACCORDING TO POSITION

	State A	State B	State C
Teachers			
Elementary	37% (30)	40% (46)	43% (21) *
Secondary	18% (27)	41% (69)	41% (22)
Administrators			
School level	54% (26)	37% (86)	42% (38)
District, Co. or Intermediate level	45% (53)	40% (95)	44% (25)
SEA personnel	31% (16)	36% (14)	44% (23)

* Numbers in parentheses are bases of percentages.

The surprisingly low utilization rate of secondary teachers in State A (only 18 percent) is more difficult to explain inasmuch as it occurs in both target and non-target areas, and also for both of the field agents. This would seem to be a matter requiring the serious attention of State A's project.

A final observation is that the rate of utilization of the SEA staff is lower in State A than in the other states. However, the base numbers are small in all three states and therefore these proportions should not be taken too seriously.

We will return to the Utilization Index when we attempt to isolate the impact of the field agents. But first we need to consider the "ripple effect" of the information that was delivered to clients.

We have been guilty of a certain "psychologistic" perspective on clients inasmuch as they have been treated as isolated individuals. It is important to realize that the primary clients of the service were by no means the sole clients. In the first place, many requesters *discussed* the information with others. When we asked, "Did you talk about any of the contents (of printed information or materials) with anyone?" the great majority of clients in each state reported some discussion with others: State A, 76 percent; State B, 80 percent; and State C, 78 percent. This question was followed by one which asked the respondents to identify the *positions* of discussants: "With whom did you talk about it?" A checklist of positions was provided,and Table 12.11 shows the proportion of target and non-target area clients who reported some discussion with specific others.[1] In the target areas, of course, discussion was most frequent with the field agents; but sizable proportions of teachers, principals, and curriculum and instruction staff were also reported as discussants. In the non-target areas, the clients talked with each of these types of personnel somewhat more frequently *owing to the absence of a field agent*. What is of greater significance, however, is the sizable minority of *target* area clients who talked with *administrators*. Even with field agents whose clients were predominantly teachers (A-2, B-1, and C-3), discussion with administrators was reported by approximately a fifth to

---

[1] In order to insure comparability between target and non-target respondents, this table excludes SEA and college or university clients.

TABLE 12.11

INDIVIDUALS WITH WHOM CLIENTS DISCUSSED THE INFORMATION, ACCORDING TO FIELD AGENT AND NON-TARGET AREA*

Discussed information with:	Percentage of Clients Reporting Discussion									
	State A			State B			State C			
	Field Agent		Non-Target	Field Agent		Non-Target	Field Agent			Non-Target
	1	2		1	2		1	2	3	
Field agent	67%	57%	9%	86%	69%	5%	51%	78%	83%	6%
District Representative for information	--	--	15	2	--	3	30	4	--	11
Teachers	50	44	42	57	52	67	49	48	55	61
Principal	13	35	38	28	34	41	24	39	38	39
Supervisor	--	13	25	2	16	14	14	13	3	28
Curriculum and instruction	10	30	42	19	32	40	16	9	14	50
Superintendent	7	--	45	7	9	18	19	9	14	6
SEA staff	--	4	4	3	7	18	3	26	--	11
Students	--	9	6	9	7	8	14	13	3	28
Parents	3	--	6	5	6	4	5	4	14	11
School board	--	4	2	7	4	5	--	--	3	--
Staff in other schools	3	--	6	10	17	14	11	4	10	22
All other	13	9	21	2	14	15	14	--	10	33
N	(30)	(23)	(53)	(58)	(71)	(102)	(37)	(23)	(29)	(21)

---

*For purposes of comparability between target and non-target respondents, SEA staff and college or university requesters are excluded from this table.

two-thirds of the clients. Thus, persons in positions of authority were by no means neglected by teachers when considering use of the information. Quite obviously, the local power structure was also brought into play.

A second indicator of the "ripple effect" of the information program is the large proportion of clients in each state who gave or loaned the information to others. In reply to the question, "Did you give or loan any of the information or materials to anyone?" the following proportions answered affirmatively: State A, 45 percent; State B, 56 percent; State C, 40 percent. These figures represent an increase in coverage of the service beyond primary clients by almost half. And about half of the time it was teachers and half the time administrators who received the information secondhand, according to a follow-up question about position. Not only does the practice of passing on information signify wider coverage, but it means that the clients were sufficiently impressed by its worth to make it available to their colleagues.

Finally, it seems that the information that was shared with others was actually of some value to these secondary recipients. We asked, "Do you think that the information or materials was helpful to the other person? (If more than one person, was it helpful to any one of them?)" Clients in State A who had loaned or given information were most confident about its value to others, 86 percent so responding. In States B and C, there were much higher proportions of "can't judge" responses; but even in these two states 70 percent and 66 percent, respectively, of the lenders averred that the information had been of value to others. In short, not only coverage but apparently also impact was increased by sharing the information with colleagues.

These results are not too surprising in view of the fact that information was often requested for group use. Nearly two-thirds of the clients in each state indicated that the information had been ordered "as part of an ongoing project or program." (See question 3 in the questionnaire.) Undoubtedly, committees and other individuals were frequently implicated through these projects and programs.

The Influence of the Field Agent

The crux of any extension system is the linkage person. In this section we examine both subjective and objective measures of outcomes associated with field agent contact. As noted in Chapter 5, frequently the Pilot State clients were assisted by individuals other than field agents, i.e., SEA and other subject area specialists. This happenstance furnishes the opportunity to compare field agent contact with other types of assistance, as well as with no assistance whatsoever. In the present discussion, therefore, we use the personal assistance typology introduced in Chapter 5. Here the typology is reduced to four types of clients: (1) those who were assisted by both a field agent and a consultant, (2) those who had contact with only a field agent, (3) those who had contact with only a consultant, and (4) those who received no assistance at all, except perhaps in filling out a form to request information. By using this typology, not only are we able to isolate the influence of field agents, but to compare their influence with that of consultants.

Since a large proportion of clients who received "no assistance" were not school personnel (SEA specialists, college and university personnel, students, school board members, etc.), in order to obtain comparability between assisted and unassisted clients, these individuals are excluded from the following analysis. We are here concerned, then, with teachers, administrators, and district or intermediate level specialists--in other words, local educators.

Subjective appraisals. Table 12.12 sets forth the responses of clients to our major subjective evaluation item. And it can be seen that the clients of field agents in two states (A and B) were more likely to value the information than clients without field agents (52 percent vs. 31 percent in State A, and 37 percent vs. 30 percent in State B). However, in both of these states this effect was mainly due to the combination of field agent and consultant. Fully two-thirds of the clients in State A and almost half in State B who were exposed to a combination of agent and other individuals indicated that the information had been "very useful."

Nevertheless, discounting the presence of a consultant (that is, comparing line 1 with line 3, and line 2 with line 4), we see that the field agent enhanced subjective value of the information by roughly 25 percent in State A and 7 percent in State B. (These figures are derived by simply taking the average of the two percentage differences within each state while controlling for the presence of a consultant. Because of small N's, such figures should be referred to only as rough approximations of impact.)

What about the effect of a consultant regardless of the presence of a field agent? Comparing line 1 with line 2, and line 3 with line 4,

TABLE 12.12

PROPORTION OF CLIENTS WHO SAID THAT INFORMATION WAS "VERY USEFUL," ACCORDING TO SOURCE OF ASSISTANCE*

	Percentage of Information "Very Useful"					
Source of Personal Assistance	State A		State B		State C	
1. Field agent and consultant	67% (12)	52% (40)	44% (16)	37% (76)	22% (18)	19% (58)**
2. Field agent only	46% (28)		33% (60)		18% (40)	
3. Consultant only	30% (20)	31% (73)	38% (58)	30% (162)	38% (39)	31% (65)
4. No assistance	32% (53)		26% (104)		19% (26)	

*SEA and college or university clients are omitted from this table.

**Numbers in parentheses are bases of percentages.

we now find an average difference of 11 percent in both States A and B. Bearing in mind the small number of cases on which these statistical estimates are based, and the possibility that non-field agent clients might simply be harder to impress with information because of greater sophistication, one might very tentatively conclude that field agents in State A produced greater impact on the client's judgement of information than consultants, while in State B the impact of agents and consultants was about the same.

Turning to appraisals of personal assistance, we run into a severe problem of small base numbers. As shown in Table 12.13, however, when the field agent did *not* offer any help in States A and B, *a minority* of clients felt that assistance had been "very useful." When field agents *were* involved, on the other hand, about *three-fourths* felt the same way. Further, only in State A is there a suggestion that the combination of field agent and consultant was more beneficial than a field agent working alone. What seems to emerge, then, is that *field agents, with or without back-up from subject matter specialists, were viewed as superior to subject matter specialists alone*. This conclusion will be reinforced by subsequent data, but first let us consider the case of State C.

Earlier, in Chapter 5, we saw that the field agents in State C were rated lower than their counterparts in the other states on most of the traits or activities submitted to the clients for appraisal (see Table 5.8). The statistics reported here confirm these earlier findings. The agents' clients in State C were far less satisfied than clients elsewhere with *both* information and assistance. Since the three agents differed widely in skills and personal attributes, it is hard to believe that they were uniformly poor on almost all criteria. Moreover, we shall soon see that the

TABLE 12.13

PROPORTION OF CLIENTS WHO SAID THAT ASSISTANCE WAS "VERY USEFUL," ACCORDING TO SOURCE OF ASSISTANCE*

	Percentage of Assistance "Very Useful"								
Source of Personal Assistance	State A			State B			State C		
1. Field agent and consultant	100%	(9)	79% (24)	69%	(13)	69% (56)	45%	(11)	47% (35)**
2. Field agent only	67%	(15)		70%	(43)		48%	(23)	
3. Consultant only	43%	(7)		43%	(30)		60%	(15)	

---

*SEA and college or university clients are omitted from this table.

**Numbers in parentheses are bases of percentages.

clients of field agents in State C were just as likely to implement their information as the clients of other field agents (and that agent C-3 had the highest utilization rate of all). Thus, it would seem that school personnel in State C were simply more difficult to impress, a characteristic which was attributed in Chapter 5 to a certain measure of social insularity and a strong "home rule" ideology in State C.

But why doesn't the same response extend to consultants in State C? As seen in Tables 12.12 and 12.13, clients who had only consultants for assistance were no less satisfied with either information or assistance than similar clients in the other states. This statistical anomaly can be explained by taking into account a very special circumstance in State C.

There the dissemination service was never "officially" made available to local educators in most non-target areas. A single individual employed by the SEA, however, assumed the role of information specialist vis-à-vis her own clientele in the field of special education. Access and credibility with clients had already been established by this "agent." Her new, informal role of information specialist, therefore, could only further enhance her value in the eyes of special education personnel. Thus it is that in State C we find that clients who had contact only with consultants were more satisfied with the information than were clients of the Pilot State field agents.

The results from States A and B regarding assistance are in the same direction as those regarding information, but much stronger. That is, exposure to a field agent had much greater impact on appraisals of assistance than on appraisals of information. Quite obviously, the field agents did not simply enhance the value of information, but made a distinct and lively contribution of their own.

Actual Use. Turning to more objective measures of utility, we will apply the Utilization Index (scale of 1 - 4) described earlier. This index, it will be remembered, is based on responses to the open-end question concerning use of the information and the responses to the checklist question concerning benefits. Table 12.14a shows the proportion of clients in the three states who scored 1-3 on the Utilization Index according to the typology of assistance; and Table 12.14b shows the same figures for those who scored especially high on the Utilization Index (scores 1 or 2). The latter measure of "use" is more restrictive.

It would appear that the field agent made roughly the same difference in all three states, regardless of which of these measures of use is employed. Thus, in Table 12.14a, the percentage difference between clients in State A with and without field agent assistance is 13 percent; in State B, it is 9 percent; and in State C, it is 9 percent. However, the presence of a consultant also made a difference. Discounting the presence of a consultant by subtracting line 3 from line 1, and line 4 from line 2, we find *an average percentage difference attributable to field agents of 11.5, 10.5 and 8.5* in *States A, B and C, respectively*. Consultants yield somewhat smaller differences when we discount the presence of field agents (i.e., by subtracting line 2 from line 1, and line 4 from line 3). *The average difference attributable to consultants is 10.5, 7.5 and 2.5 in States A, B and C, respectively*.

If we apply our more stringent measure of utilization (score of 1 or 2 on the Utilization Index, shown in Table 12.14b), the differences attributable to field agents *increase* in all three states, and the differences attributable to consultants *decrease* in two of the three states. Thus, the

TABLE 12.14a

PROPORTION OF CLIENTS WHO USED THE INFORMATION (SCORES 1 - 3 ON UTILIZATION INDEX), ACCORDING TO SOURCE OF ASSISTANCE*

Source of Personal Assistance	State A			State B			State C		
1. Field agent and consultant	54%	(13)	48% (44)	53	(17)	46% (79)	45%	(20)	52% (64)**
2. Field agent only	45%	(31)		44%	(62)		54%	(44)	
3. Consultant only	44%	(23)	35% (80)	41%	(64)	37% (176)	49%	(41)	43% (68)
4. No assistance	32%	(57)		35%	(112)		33%	(27)	

---

*SEA and college or university clients are omitted from this table.

**Number in parentheses are bases of percentages.

TABLE 12.14b

PROPORTION OF CLIENTS WHO SCORED HIGH ON UTILIZATION INDEX (SCORES 1 OR 2), ACCORDING TO SOURCE OF ASSISTANCE *

Source of Personal Assistance	State A			State B			State C		
1. Field agent and consultant	31%	(13)		35%	(17)		30%	(20)	
			32% (44)			25% (79)			30% (64) **
2. Field agent only	32%	(31)		23%	(62)		30%	(44)	
3. Consultant only	22%	(22)		16%	(64)		27%	(41)	
			16% (79)			17% (176)			21% (68)
4. No assistance	14%	(57)		18%	(112)		11%	(27)	

---

[*] SEA and college or university clients are omitted from this table.

[**] Numbers in parentheses are bases of percentages.

average percentage difference attributable to *field agents* when controlling for the presence of consultants is 13.5, 12.0 and 11.0 in States A, B, and C, respectively; while the difference attributable to *consultants* when controlling for the presence of field agents is only 3.5, 5.0 and 8.0, respectively. When one considers that field agents more often *solicited* clients, while all other clients were highly *self-selected*, it becomes clear that the differences reported here are conservative. (As noted in Chapter 5, target area clients were more often located at district and intermediate levels and held higher degrees than target area clients. And in any case, the fact that non-target requests were *self*-initiated would suggest greater commitment to follow-through on information.)

These statistics, then, not only demonstrate the impact of field agents on the utilization of information by clients, but taking into consideration the greater initiative of clients without field agent contacts they also demonstrate *the superiority of field agent generalists over subject matter specialists in the induction of educational change*.

There are two basic features of the field agent role which might account for this advantage. In the first place, expertise is independent of the agent. This feature has two consequences: (1) there is no *status-differential* between client and agent owing to the latter's greater knowledge or higher organizational rank; and (2) the agent will not necessarily be held responsible for *poor* information. The first consequence makes the agent more socially attractive as a collaborator. It is not the agent that presumes to know more than the local practitioner--it is the information. Further, subject matter specialists, although ostensibly staff personnel, are often given the perquisites of line personnel--association with superintendents and state staff, authority, administrative titles, etc. This factor further contributes to the social distance between school practitioners, on the one hand, and district, intermediate or SEA personnel, on the other.

The second consequence of separating expertise from the person of the agent is that the agent is more protected from *substantive failure*. An expert might be rejected because his advice or knowledge appears irrelevant, too technical, or just plain specious. Further, we would speculate that rejection is more likely to be directed against experts than against retrieved information, for the former is often limited in scope of ideas while the latter might cover a range of alternative viewpoints or practices. Thus, the expert is more likely to be viewed as an advocate of a particular approach, whereas information may be seen more neutrally as furnishing alternative directions. Thus, not only is the agent exonerated by the client for bringing poor information (although the client may blame "the service"), but misinformation and provincial advocacy are less likely to occur in the first place.

A second basic feature of the field agent role as it developed in the Pilot State projects is that the agent was not introduced to clients as an instrument of change, but as a conveyor and interpreter of available knowledge. With the subject matter specialist, it is taken for granted from the outset of the relationship that some manner of change is expected. This expectation of the specialist might create a certain amount of status-threat or danger of imposition from above. To be sure, the field agent also plays the part of a change-agent, but only _after_ his role as conveyor of information has legitimized his presence and precluded suspicions of his pushing or imposing himself on clients. And as mentioned earlier (Chapter 4), most of the field agents were extremely careful to avoid imposing themselves on clients. Under these circumstances, then, clients might prefer to collaborate with field agents rather than with subject matter specialists.

In spite of the inhibitions acting on field agents, it is quite possible that their basic contribution lies in _change-oriented_ activities rather than in _information-enhancing_ activities. We have already seen in Chapter 5 that clients valued the ability of the agents to help them interpret information less often than they did several other skills, including help with implementation. In order to pursue this issue, we observed whether clients who had contact with field agents experienced fewer _problems_ with the information or materials which they received. (The problems mentioned in the questionnaire, question 14a., concerned relevance, specificity, amount of guidance, comprehensiveness, newness, complexity, and difficulty of implementation.) And as shown in Table 12.15, the clients of field agents were more likely to have had problems with the information than other clients. Apparently, the field agents' success in encouraging use, which we have already witnessed, was not due to their having helped clients to explicate the information.

Possibly our measure of the agent's contribution to client understanding of information is much too crude. As discussed earlier in our qualitative chapters, the agents employed a variety of techniques to induce clients to read, absorb and weigh the information set before them. In the process, they may have given a great deal of tacit help in understanding the materials--for example, by highlighting particular ideas. Such activities might have remained below the clients' threshold of awareness, and therefore fail to be reflected in a brief questionnaire.

Nevertheless, it remains an intriguing possibility that the field agents contributed less to the value of the information than the information contributed to their value. By rendering their involvement acceptable and even desirable to clients, the retrieval process might have helped the field agents to assume a more directive role than the clients had originally anticipated. If so, then the agents' ability to "interpret" information in an expert fashion might be somewhat irrelevant to the success of an extension program--which is not to say that better interpretive skills would not increase success. This aspect of field agent activities probably needs more attention in future training of field agents. The fact remains, however, that so long as the client's interest

TABLE 12.15

PROPORTION OF CLIENTS WHO HAD NONE OF EIGHT PROBLEMS WITH INFORMATION, ACCORDING TO SOURCE OF ASSISTANCE*

Source of Personal Assistance	Percentage "No Problems" with Information					
	State A		State B		State C	
1. Field agent and consultant	60% (10)	35% (34)	38% (13)	25% (64)	40% (15)	28% (54)**
2. Field agent only	25% (24)		22% (51)		23% (39)	
3. Consultant only	45% (22)	40% (67)	27% (52)	33% (147)	47% (30)	37% (49)
4. No assistance	38% (45)		36% (95)		21% (19)	

---

*SEA and college or university clients are omitted from this table.

**Numbers in parentheses are bases of percentages.

in taking some form of action is substained and cultivated by the field agent by reference to information, there is a fairly good chance of implementation. Sustaining and cultivating such an interest does not necessarily call for expert interpretation of content--what it does call for, however, is expertise in interpersonal relations.

Subject matter consultants were not the only persons in addition to field agents who served clients. In two of the states, "district representatives" of the information service were appointed in cooperation with the local district. The purpose of these representatives, as mentioned earlier, was to serve as a go-between for clients who wished to order information but did not know how to fill out a request form or where to send it, or how to follow-up their initial request with further requests for hard-copy, more specific information, etc. Thus, these information representatives were essentially performing the retrieval and referral functions of field agents discussed in Chapter 3. They were not expected to spend a good deal of time with clients in helping them interpret or implement the information. Since we have argued earlier that the field agent's effectiveness can be attributed to his repertoire of skills, and in particular his ability to shift from information specialist to catalyst without posing a threat to clients, it becomes important to see if district information representatives who perform only retrieval functions have as much success with utilization as field agents.

According to Table 12.16, they are not as successful as field agents. Using a more restrictive definition of utilization (scores 1 and 2 on the Utilization Index), we find that 28 percent of the clients of field agents in State A utilized the information compared with 18 percent of the clients served by district representatives. In State B the difference is even larger: 21 percent of the field agents' clients utilized the information compared with only 7 percent of the clients served by district representatives. Similar differences occur with regard to subjective value of the information. In State A, 46 percent of the field agents' clients felt that the information was "very useful" compared with 31 percent of the clients of district representatives. And in State B, the respective figures are 30 percent for field agents' clients and 21 percent for district representatives' clients.

TABLE 12.16

USE OF INFORMATION AND SUBJECTIVE VALUE OF INFORMATION, ACCORDING TO PRESENCE OF FIELD AGENT OR DISTRICT INFORMATION REPRESENTATIVE

	State A		State B	
	Field Agent	District representative	Field Agent	District representative
Utilization Index				
Scores 1 - 3	43% (65)	41% (49)	40% (159)	31% (29)
Scores 1 or 2	28% (65)	18% (49)	21% (159)	7% (29)
Value of information				
"Very useful"	46% (59)	31% (48)	30% (151)	21% (24)

These differences are all the more striking when we consider that the clients of district representatives were more often "self-starters" and therefore more apt to follow-through when information was delivered. Indeed, the professional positions of the clients of district representatives are higher than those of field agents' clients, suggesting greater skills and motivation in the utilization of expertise. In State A, 89 percent of district representatives' clients were administrators compared with 41 percent of field agents' clients; while in State B, the respective figures were 79 percent and 56 percent. Thus, not only do district representatives have less impact than field agents, but their coverage is more limited.[1]

One means of resolving the dilemma of effecting savings in cost and time vs. lower utilization of information under district representatives would be to combine field agents and district representatives in the same area. This practice is fraught with danger, however. As we pointed out in Chapter 4 with regard to delegation of field agent functions:

> If delegation is effected, it will result in a far greater routinization of the request-handling process than has hitherto existed. Most of the agents still had their finger on the status of each request, background information on the motivation behind the request, particular school characteristics which should be considered in the implementation process, and so forth. If the majority of requests are transmitted by forms, the agent will inevitably lose touch with many of the problems within the target district. ...No longer will he need to function in a messenger capacity... But the agent's role in diagnosis and specification (probing) will also be reduced, since he will probably contact a client for clarification of a request only when it is completely unclear what is needed. ...The agent will have to justify his presence in a target area to a much greater extent on the basis of his ability to handle and interpret research results, and to facilitate implementation. ...On the other hand, he may be hampered in effecting real change since he will be somewhat removed from the client and his day-to-day context. Further, to the extent that his former messenger role served to legitimate later change efforts, he may lose legitimacy in the eyes of his clients to accomplish precisely what he intends to devote more time to.

---

[1] Oddly enough, even direct requests more often originated with teachers than did requests routed through district representatives. The proportions of requests from teachers were the following: in State A, through field agents, 59 percent; direct, 54 percent; through district representatives, 11 percent; and in State B, through field agents, 44 percent; direct, 36 percent; through representatives, 21 percent.

As so often happens in the affairs of men, what appears to be the most economical and efficient manner of handling a problem (here, by division of labor and the free services of a part-time information representative) may actually defeat the goals being pursued. Since two of the pilot states are beginning to move in this direction, we feel compelled to emphasize the point.

Final and definitive evidence that clients appreciated field agents more than other individuals who might have offered help is presented in Table 12.17. This table is based on responses to the final question in our questionnaire:

> Of all the persons with whom you talked about your need or problem, whom did you find most helpful? (Please indicate position.)

The question was left open-ended so that the respondents would not be alerted to any particular individual or position. Also, notice that the question did not limit the respondent to persons associated with the retrieval of information, but cast its net broadly enough to cover anyone who had been exposed to the client's need or problem. Thus, it is rather striking evidence of the value of field agents to find that the majority of clients in the target areas (i.e., with field agents) mentioned the agent as having been "most helpful."[1] In contrast, in six out of seven target areas the proportion who mentioned any single position other than field agent does not exceed 10 percent.

---

[1] Agent C-1b, an assistant of the original field agent, was viewed as a district representative by some clients, which explains the large proportion of his clients who mentioned this position.

TABLE 12.17

PROPORTION OF CLIENTS WHO CITED DIFFERENT INDIVIDUALS AS HAVING BEEN MOST HELPFUL, ACCORDING TO FIELD AGENT AND NON-TARGET AREA*

	State A			State B			State C				
	Field Agent			Field Agent			Field Agent				
Most Helpful	1	2	Non-target	1	2	Non-target	1a	1b	2	3	Non-target
Field Agent	73%	66%	5%	87%	73%	10%	50%	18%	53%	74%	7%
District information representative	-	-	13	-	-	-	19**	64**	-	-	7
SEA staff	-	5	8	-	4	20	-	9	18	4	33
Teacher	5	10	3	-	2	6	6	-	-	4	-
Principal	9	5	2	7	8	7	6	-	-	7	7
Supervisor	-	-	5	2	2	1	-	-	-	-	13
Superintendent	-	-	3	-	-	6	-	9	-	4	-
C&I staff	-	-	8	-	-	6	6	-	6	-	7
Students	-	-	-	-	-	-	-	-	6	-	-
Staff of another school	-	-	-	2	-	1	-	-	-	4	-
Retrieval staff	-	-	24	-	-	22	-	-	-	-	20
Other	8	4	26	-	7	17	7	-	5	3	6
Negative response	5	10	3	2	4	4	6	-	12	-	-
N =	(22)	(21)	(38)	(47)	(52)	(70)	(16)	(11)	(17)	(27)	(15)

---

* SEA and college and university clients are omitted from this table.

** Was probably field agent 1b, the assistant to 1a.

Especially noteworthy is the fact that staff members responsible for curriculum and instruction were not mentioned as having been most helpful by any of the clients of six agents. Clearly, the agent's contribution excelled that of all other individuals within the client's professional orbit, at least according to their own appraisal.[1]

Turning our attention to the non-target requesters, we find that other staff members of the Pilot State projects were mentioned most frequently. A fifth to a fourth of the clients in the three non-target areas mentioned retrieval staff as having been "most helpful" with their need or problem. And finally, "district information representatives," who had been appointed locally in certain non-target school districts at the instigation of the Pilot State project directors in States A and B, were mentioned by 13 percent of the non-target clients in State A, but by none in State B. (State A's program in non-target districts had preceded that of State B by several months which might account for this difference.) In short, even in the non-target areas of the three states, personnel who were associated with the new Pilot State program either as retrieval specialists or as district representatives were mentioned by a substantial minority of clients as having been "most helpful" with their problem.

With respect to SEA staff, it was not always possible on the basis of respondents' replies to distinguish between SEA consultants and the retrieval staff itself. If a client cited a "member of the state department of education" as having been most helpful, for example, it could have been retrieval or other SEA personnel. Whenever this ambiguity arose, we tried to resolve it by noting other information in the questionnaire, such as whether there had been personal contact with the retrieval staff. Thus, we feel safe in concluding that the figures for SEA staff in Table 12.13. are reasonably accurate as a reflection of consultants rather than of retrieval personnel. If anything, they are inflated. On the basis of these figures, it would appear that the following proportions of clients cited SEA consultants as having been "most helpful": State A, 8 percent; State B, 20 percent; and State C, 33 percent. (The large proportion in State C reflects the work of the single SEA consultant in special education, already mentioned.) Retrieval staff, then, were mentioned more frequently than SEA consultants in State A, about as frequently in State B, and slightly less frequently in State C. And when we consider the possibility that some clients who were referring to retrieval staff were coded as having referred to SEA consultants, it becomes clear that the retrieval staff was at least as valuable as SEA consultants in all three states.

---

[1] Once again we see that the field agents in State C were valued less than in other states. However, we now find that this lower valuation is mainly due to two agents, C-1a and C-2. Agent C-3 was clearly valued as highly as agents in the other states.

We certainly would not recommend the elimination of SEA consultants on the basis of these data. The efforts of local experts are definitely needed as a back-up to a dissemination-extension system. But we would seriously question the utility of SEA consultants in dealing with local school people beyond the performance of this back-up function. In the first place, field agents can perform the job of helping clients at the local level better than consultants--as shown by our survey data. In the second place, local consultants cannot possibly be as knowledgeable as information retrieved from the national pool of research and exemplary practice. They may be able to summarize a welter of information on a particular subject, but this function can be performed through technical writing. Further, they may have a unique understanding of the local situation, but so does the field agent who roams the districts every day. Finally, they may be well suited for dealing with district level specialists, but our data suggest that in general the clients of field agents very rarely mentioned SEA staff as having been "most helpful," despite the fact that district level staff frequently requested information. Realizing that our observations are limited to only three states, we must tentatively conclude that the best future contribution of SEA consultants would be to serve as auxiliary personnel attached to statewide dissemination-extension systems.

The Effect of Agents on Different Professional Positions

The question of whether field agents are more appropriate for teachers or administrators naturally arises. We have shown that the agents were especially successful in generating requests from teachers, and especially from those at the elementary level. But we have also mentioned that administrators might be less inclined to take the time to read materials or to follow-up with new requests, and would therefore benefit greatly from the presence of a field agent. In order to see whether teachers or administrators who had contact with field agents were more prone to implement the information than those without such contacts, we examined scores on the Utilization Index according to field agent assistance for teachers and for administrators.

There does not appear to be a consistent pattern for all three states. In States A and B, field agents were more effective with administrators, while in State C they were more effective with teachers. (See Table 12.18) The one conclusion that can be drawn is that the value of field agents is not restricted to either teachers or administrators. Apparently of greater importance than the professional position of the client are certain other characteristics of either the client or the agent.

We have seen earlier that the former professional position of the field agents influenced whom they selected as clients -- former administrators moved toward administrators and former teachers moved toward teachers. (See Chapter 2, Table 2.1) Thus, there is definitely a homophily-effect in input interaction. Does this mean, then, that former teachers work better with teachers, and former administrators work better with administrators, in output interaction? According to the evidence presented in Table 12.19, the answer is in the negative. In fact, the situation is quite the reverse. Every one of the former teachers had higher utilization among administrators, and two out of three former administrators had higher utilization among teachers.

TABLE 12.18

PROPORTION OF CLIENTS WHO USED THE INFORMATION (SCORES 1 - 3 ON UTILIZATION INDEX), ACCORDING TO POSITION AND CONTACT WITH FIELD AGENT

	State A		State B		State C	
Position of client	F.A. contact	No contact	F.A. contact	No contact	F.A. contact	No contact
Teacher	33% (21)	26% (27)	42% (40)	37% (39)	56% (23)	39% (36)*
Administrator**	57% (14)	43% (47)	55% (31)	37% (97)	45% (38)	47% (30)

---

* Numbers in parentheses are bases of percents.

** Excludes SEA staff.

TABLE 12.19

PROPORTION OF TEACHERS AND OF ADMINISTRATORS WHO USED THE INFORMATION (SCORES 1 - 3 ON UTILIZATION INDEX), ACCORDING TO EACH FIELD AGENT (CLASSIFIED BY ADMINISTRATIVE OR TEACHING BACKGROUND)

	Field Agents						
	Former Teachers				Former Administrators		
Position of client	A-1	B-1	C-2	C-3	A-2	B-2	C-1
Teacher	38% (29)	41% (42)	43% (14)	53% (19)	17% (12)	44% (27)	50% (8) *
Administrator**	67% (6)	48% (31)	50% (14)	67% (18)	50% (20)	32% (56)	37% (19)
Total	43% (37)	44% (73)	46% (28)	60% (37)	39% (33)	35% (85)	39% (28)

*Numbers in parentheses are bases of percents.

**Excludes SEA staff.

The one exception to complete heterophily in effectiveness of output interaction might be understandable. Agent A-2 was located at the district staff level in an urban school system, the largest in the pilot state program. Thus, when he moved out into the local schools, he was probably seen as wielding some authority. In addition, he had actually been a specialist at the district level before assuming the role of field agent, and prior to that a high school principal. This combination of background and rank in the district may have conferred a great deal of authenticity and even authority on the agent in the eyes of his administrative clients. Since it was building level rather than district level administrators who responded to contacts with agent A-2 with a higher rate of utilization, this explanation makes sense. Thus, not only were A-2's administrative clients more "innovative" than his teacher clients, but the former were more likely to use the information than the administrative clientele of any other field agent, regardless of background. By the same token, teachers might have been less responsive to A-2 (and it seems that his teachers were the least responsive of all agents' clients) precisely because of A-2's seeming authority--a matter which we have already discussed in trying to understand why field agents tend to achieve better results than subject matter specialists.

Excluding the case of A-2, we have evidence here that a cross-fertilization of professional orientations between field agent and client promotes greater interest or effort on the part of clients. Research in other contexts has found much the same effect. In a study of the productivity of university scientists, Pelz found that researchers who worked with colleagues from fields other than their own, and also had friends among those in their own field, tended to be the most productive.[1] Apparently, the security of homophily (among friends) makes it possible for scientists to risk heterophily (among work associates), which in turn stimulates productivity. Perhaps the same forces are at work here -- the agents, having the security of many like-minded clients, are able to risk the insecurity of dealing with clients in positions different from their own former status. Whether it is the agent who then exerts extra effort with these "cross-over" clients, or the clients themselves who are stimulated by the fresh perspective brought to the problem by an agent with a different background, is impossible to say. And of course, both influences may be operating.

---

[1] Pelz, Donald C., "Some Social Factors Related to Performance in a Research Organization," Administrative Science Quarterly, 1 (1956), pp.310-325.

An alternative explanation for these findings is that the agents crossed professional boundaries mainly when the clients themselves initiated the contact or had given some sign of serious interest in change. Thus, the "cross-over" clients may have been somewhat self-selected, and therefore more likely to follow-through.

But whatever the explanation, the possibility of a heterophily-effect in the output phase reinforces our earlier proposal to create teams of field agents in order to combine different backgrounds, thereby reaching a wider range of clients and also having greater impact through cross-fertilization.

Client Demand: Two Final Measures of Satisfaction

We have seen a good deal of evidence to support the conclusion that the clients of the Pilot State Program were well satisfied. There remain two additional indicators of satisfaction which reflect future demand for the service and reinforce our earlier findings: (1) plans to use the service again, and (2) recommendation of the service to others. Responses to questions bearing on these issues, according to target and non-target location of clients, are presented in Table 12.20. The great majority of clients in all areas stated their intention to use the service again. And in six of the ten areas, approximately the same proportion indicated that they had already recommended the service to others in their district or agency. These figures suggest an expanding use of the Pilot State projects by new and old clients, with consequent dangers of overload. Clearly, the service has stimulated considerable demand.

TABLE 12.20

PROPORTION OF CLIENTS WHO PLAN TO USE THE SERVICE AGAIN,
AND WHO HAVE RECOMMENDED THE SERVICE, ACCORDING TO
FIELD AGENT AND NON-TARGET LOCATION

	State A			State B			State C				
	Field Agent			Field Agent			Field Agent				
	1	2	Non-target	1	2	Non-target	1a	1b	2	3	Non-target
"Do you plan to use this service again?"											
Yes	89%	90%	88%	84%	88%	78%	85%	83%	88%	76%	88%
Don't know	8	10	12	15	11	20	11	13	12	19	12
No	3	-	-	1	1	2	4	4	-	5	-
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
N	(37)	(30)	(74)	(70)	(81)	(135)	(26)	(23)	(25)	(37)	(26)
"Have you already recommended the service to others?"*											
Yes	75%	90%	74%	84%	88%	75%	58%	61%	57%	71%	85%
N	(36)	(30)	(69)	(70)	(80)	(130)	(24)	(23)	(23)	(34)	(26)

---

*Virtually all of the clients replied affirmatively to the immediately preceding question: "Would you recommend this service to other personnel in your district or agency?"

CHAPTER 13

OUTCOMES OF THE RETRIEVAL PROCESS

In this chapter we shall examine the effect of two important features of the information retrieval process on clients' satisfaction and on their utilization of materials delivered to them. The two features to be studied are turnaround time and type of search. Further, we shall attempt to determine if specificity of the topic and statement of purpose were adequately considered by the retrieval staff in determining the most suitable method of search as signified by client satisfaction and utilization. (All of these variables have been described in detail in preceding chapters.)

Turnaround Time

Turnaround is an issue which is given a great deal of emphasis by retrieval specialists. Implicit in this emphasis is the assumption that the usefulness of information may be diminished if there is considerable delay before a client receives the materials he has requested. The situation or the problem which gave rise to a request for information might change over a period of a few weeks or clients might shift their attention to other matters. Also, clients might become so annoyed with turnaround times which they consider to be excessive that their negative reaction might extend to the products of the retrieval process. Opposed to these assumptions is the consideration that longer turnaround time might be caused by more thorough search procedures, thereby yielding better service to clients and justifying lengthier turnaround.

With these opposing arguments in mind, it is of interest that the time required to service requests is not consistently related to clients' judgements of the practical value of the information or to their utilization of it. As shown in Table 13.1, there is some indication in the case of State A that information which required the longest turnaround was more often judged "very useful," but the data show no greater likelihood of utilization. In States B and C, neither subjective value of the information nor objective utility are related to turnaround time.

Since we have seen that requests handled by field agents received longer turnaround (Chapter 7), and also that field agents enhanced the value and utilization of information (Chapter 12), these two factors might be working against each other. That is, negative effects of lengthy turnaround might be cancelled out by the positive effects of field agents. Or, the priority given to target areas might mean that longer turnaround for the clients of field agents entails more careful search procedures, while in the case of non-target clients it might simply reflect a certain amount of procrastination. For this reason we examined the relationship between turnaround, on the one hand, and satisfaction and utilization, on the other, according to whether the request was handled by a field agent. (SEA and college and university clients are excluded from this analysis.)

Table 13.2 shows that clients without field agents in both States A and B were more satisfied when turnaround was short, but that clients with field agents were more satisfied when turnaround was long. (The same pattern is true of the clients of field agents in State C; but other clients were apparently unaffected by turnaround time -- although the small base numbers make any interpretation hazardous.) Thus, the presence of a field

TABLE 13.1

VALUE AND USE OF INFORMATION, ACCORDING TO TURNAROUND TIME

	Turnaround		
	Within 2 weeks	From 2 to 4 weeks	More than 4 weeks
State A			
% "very useful"	34% (29)	36% (69)	46% (52)
% used (1-3 on Utilization Index)	42% (34)	34% (73)	48% (59)
State B			
% "very useful"	29% (160)	26% (127)	33% (46)
% used (1-3 on Utilization Index)	36% (171)	44% (138)	40% (50)
State C			
% "very useful"	35% (55)	24% (46)	41% (17)
% used (1-3 on Utilization Index)	54% (59)	54% (48)	53% (17)

TABLE 13.2

VALUE AND USE OF INFORMATION, ACCORDING TO TURNAROUND TIME AND WHETHER REQUEST CAME THROUGH A FIELD AGENT*

	Through a field agent			Not through a field agent		
	Within 2 weeks	2-4 weeks	More than 4 weeks	Within 2 weeks	2-4 weeks	More than 4 weeks
State A						
% "very useful"	23% (13)	44% (16)	57% (28)	42% (12)	40% (43)	31% (16)
% used (1-3 on U.I.)	43% (14)	41% (17)	47% (32)	46% (13)	35% (46)	33% (18)
State B						
% "very useful"	27% (59)	27% (66)	46% (24)	32% (73)	28% (36)	19% (16)
% used (1-3 on U.I.)	59% (64)	43% (68)	44% (25)	34% (79)	45% (42)	44% (18)
State C						
% "very useful"	23% (13)	22% (18)	33% (9)	29% (24)	21% (14)	33% (6)
% used (1-3 on U.I.)	62% (13)	44% (18)	56% (9)	52% (27)	60% (15)	33% (6)

* SEA and college and university clients are omitted from this table.

agent not only compensated for longer turnaround, but rendered longer turnaround a benefit to clients; or, more careful and time-consuming search procedures for target area clientele eventuated in more useful information in the long run.[1]

The pattern with respect to utilization of the information is not quite as clearcut. In State A, shorter turnaround enhanced utilization among non-field agent clients (which is consistent with their subjective judgements of the information), but had no discernable effect among the clients of field agents. These results would follow from the fact that an interest in innovation among non-target clients in State A is not always sustained; and when it wanes, it is not revived because of the absence of field agents. In contrast, field agents' clients are as ready to utilize the information later as sooner. Since non-field agent clients more often received manual-plus-computer searches than field agents' clients, it is doubtful that the range or quality of information accounts for the better response of field agents' clients in the long run. It would seem, therefore, that the field agent revives interest when the material is delivered.

This explanation does not apply to State B where longer turnaround seems to have increased utilization among non-field agent clients, while reducing it among field agents' clients. This would suggest that the field agents in State B less often compensated for longer turnaround by reviving the interest of their clients. Since one of the two agents in State B infrequently engaged in follow-up, it would not be surprising if clients who had to wait a longer time did not have their interest sustained by this agent. With regard to non-target clients, however, it seems that State B was able to provide information which was used even *after* an extended period of time; or else, reached clients who could sustain their *own* interest in utilization. But whatever the reason for the differences between States A and B, the main conclusion to be drawn from these data is that *longer turnaround in itself does not reduce utilization, although it might create dissatisfaction in the absence of a field agent*. If the field agent engages in appropriate *follow-up*, or if the information produced by longer turnaround is *better* or more *relevant*, then taking longer to retrieve information might actually enhance utilization.

---

[1] Still another possible explanation is that the field agents' clients were not in as much hurry for the information as the non-target clients. This possibility can be ruled out, however, for a larger proportion of the field agents' clients in State A, and about the same proportion in State B, said that the problem or need had been "very pressing" when the information was requested. (See question 2 in the questionnaire for clients.)

All of which is not to say that clients who have to wait several weeks for information do not often feel that turnaround time is unreasonable. As shown in Table 13.3, the longer one had to wait in States A and B, the greater the likelihood of saying that the period was "too long." State C departs from this trend, but mainly owing to *underestimation* of the length of time that it had taken to receive materials.[1] (All but one of the 16 clients in State C who had to wait more than four weeks *underestimated* the amount of turnaround time.[2]) This point raises the important issue of the effect of *subjective* turnaround time as contrasted with *real*

---

[1] Clients' judgements of turnaround time are based on the following questions: "About how long did it take for you to receive information or personal assistance after you made your initial request on this topic?" We then asked, "In terms of your needs would you say this was too long, or a reasonable length of time?"

[2] By comparing the length of time reported in the questionnaire with the time as coded from the retrieval forms, we are able to identify underestimators.

TABLE 13.3

PROPORTION WHO THOUGHT TURNAROUND WAS "TOO LONG", ACCORDING TO TURNAROUND TIME

	% Who Said "too long"		
Turnaround	State A	State B	State C
Within 2 weeks	7% (30)	12% (163)	14% (57)*
From 2 to 3 weeks	17% (42)	9% (88)	23% (30)
From 3 to 4 weeks	19% (31)	19% (43)	18% (17)
More than 4 weeks	44% (57)	31% (48)	--% (16)

* Numbers in parentheses are bases of percentages.

TABLE 13.4

PROPORTION WHO THOUGHT TURNAROUND WAS "TOO LONG", ACCORDING TO TURNAROUND TIME (AMONG CLIENTS WHO ACCURATELY PERCEIVED TIME)

	% Who Said "too long"		
Turnaround as accurately perceived	State A	State B	State C
Within 2 weeks	--% (19)	6% (108)	7% (27)*
From 2 - 3 weeks	29% (14)	19% (26)	22% (9)
More than 3 weeks	81% (31)	75% (16)	60% (5)

* Numbers in parentheses are bases of percentages.

time. As we saw in Chapter 7, clients tended to underestimate the amount of time required to deliver materials in all three states, and especially in State A where actual turnaround was longest (see Table 7.8).[1]

If we observe only those cases which perceived turnaround time accurately, then the relationship between turnaround and dissatisfaction is increased enormously. As seen in Table 13.4, none of the clients in State A who received information within two weeks and who accurately perceived this period of elapsed time thought that it took "too long," compared with 81 percent of those who had to wait more than three weeks and who were aware of this time-lag. The differences in the other two states, including State C, are of the same order of magnitude. Quite obviously, a general tendency to underestimate the amount of time required to deliver materials precludes a certain amount of dissatisfaction with turnaround time.

There is still another consequence of slow turnaround which might undermine the success of a retrieval system, and that is the client's inclination to resort to the service again. Even if the information which is eventually delivered turns out to be valuable, a requester might feel that the amount of time that it took to receive information does not warrant using the service. In order to see if intentions to re-use the service were affected by turnaround, we related turnaround time to responses to the following question: "Do you plan to use this service again?" The response categories were yes, no and don't know. According to Table 13.5, turnaround time does not affect the intentions of non-target clients to use the service again, but it does affect the intentions of field agents' clients. In State A, 16 percent of the field agents' clients who had waited more than four weeks for information were uncertain about using the service again (or else

---

[1] The proportions of underestimators were the following: State A, 57 percent; State B, 47 percent; and State C, 49 percent. Thusfar we have been unable to identify the underestimators by position, etc.

TABLE 13.5

PROPORTION OF CLIENTS WHO WERE NOT PLANNING TO USE THE SERVICE AGAIN, ACCORDING TO TURNAROUND TIME AMONG FIELD AGENT AND NON-FIELD AGENT CLIENTELE*

	State A	State B	State C
Field agents' clients **			
Turnaround time:			
Less than 2 weeks	7% (14)	13% (61)	- (13)***
2 - 4 weeks	- (16)	11% (66)	- (18)
More than 4 weeks	16% (31)	22% (23)	13% (8)
Not clients of field agent			
Turnaround time:			
Less than 2 weeks	15% (13)	18% (76)	26% (27)
2 - 4 weeks	11% (45)	21% (39)	20% (15)
More than 4 weeks	18% (17)	22% (18)	- (6)

* Not planning to use the service again was defined as a negative or uncertain reply to the question: "Do you plan to use this service again?" SEA and college or university clients are excluded.

** Requests were referred to retrieval center through the field agent.

*** Numbers in parentheses are base numbers of percentages.

definitely said no), compared with only 7 percent of those who received information within two weeks. In State B, the respective figures are 22 percent vs. 13 percent, and in State C, 13 percent vs. 0 percent. Clearly, the clients of field agents were not as strongly motivated as clients who ordered information on their own. In view of these findings, it would seem unfortunate that the clients of field agents generally have to wait a longer time than non-target clients to receive information, although there does seem to be some benefit in longer turnaround (in terms of satisfaction and utilization) in State A. In that state, there would seem to be a trade-off between losing some clients with longer turnaround while increasing satisfaction and utilization with other clients. In State B, however, it seems that longer turnaround time (i.e., more than four weeks) is detrimental both to retaining clients and to giving them satisfactory service.

In sum, the turnaround question is not an easy one to answer. Certainly, it is not the case that, as one of the original proposals put it, "the key to successful implementation of an adequate information dissemination system is the speed with which pertinent information can be supplied." The combination of pertinent information and consistent follow-up by field agents might serve not only to compensate for longer waiting periods, but to render longer turnaround beneficial to the client. Here, then, is an unanticipated contribution of extension agents when tied to a well operated retrieval system. They allow more time to be taken in searching for the best materials available -- providing they engage in serious follow-up when these materials are eventually delivered.

Type of Search

Another important feature of any retrieval service is the type of search which is rendered. Presumably certain kinds of search procedures are better suited for certain information needs and for certain types of clients. Here we shall try to test this assumption with the data available, and also attempt to see if the typical search tactics of the retrieval centers were well suited to different features of clients' requests.

Type of search by itself bears little relationship to subjective value or to objective utilization. (See Table 13.6) The only possible exceptions are in State B where comprehensive search (more than one kind) seems to be associated with utilization, and where manual searches are less often valued and utilized.[1] In State A, it seems to matter little whether either manual or computer search, or both, are performed. This result raises some doubt about the much greater effort expended in State A on multiple searches. (Sixty-one percent of the requests received multiple searches in State A compared with less than a fourth in the other states.) On the other hand, it is true that fewer problems were encountered with the products of comprehensive search in State A than with other kinds of searches. When presented with a list of several possible problems in the material that was delivered (relevancy, specificity, etc.), 41 percent of the clients in State A who had received multiple searches indicated that they had had none of these problems, compared with 28 percent who had received manual searches alone and 23 percent who had received computer searches alone. (See line 3 in Table 13.6.) While these figures would seem to vindicate the preference of State A for multiple searches, the fact that neither satisfaction nor utilization was enhanced by multiple searches in State A makes the procedure somewhat doubtful. We will pursue this issue further in a moment. Conversely, although comprehensive searches in State B were more likely to be problem-ridden than other types of searches (except manual), they were also more likely to yield satisfaction and utilization.

---

[1] Fully 17 percent of State B's manual searches were regarded as "not useful," and the same proportion made negative comments in response to our open-end question concerning actual use.

What these anomalous findings suggest is that having problems with some of the information which is yielded by a comprehensive search does not deter a client from being satisfied with or using what is of value. Presumably, clients are picking and choosing from an array of information afforded by comprehensive search, some of which is good and some of which is not so good. If they can find at least one piece that can be readily absorbed and that fits their situation, they will express satisfaction and demonstrate use. For some reason, State B was more inclined to provide that kind of information in their comprehensive searches.

Since State B's manual searches were highly problem-ridden, not very satisfying and not often utilized, the explanation for the success of State B's comprehensive searches must reside in their combination of packets and computer searches. State A's multiple searches were confined to manual and computer searches; and the latter, when given alone, was no less often utilized than in State B. Ergo the greater success of State B's comprehensive search would have to reside in the provision of packets. This automatically means more opportunity for problems to have arisen with

TABLE 13.6

EVALUATION AND USE OF INFORMATION, ACCORDING TO TYPE OF SEARCH*

	Type of Search			
	Manual only	Computer only	Packet only	More than one type
State A				
1. % "very useful"	38% (21)	37% (30)	-	37% (86)**
2. Score of 1-3 on Utilization Index	44% (23)	38% (32)	-	40% (92)
3. "No problems" with information	28% (18)	23% (26)	-	41% (76)
State B				
1. % "very useful"	21% (42)	24% (89)	33% (123)	30% (80)
2. Score of 1-3 on Utilization Index	30% (47)	34% (100)	40% (127)	50% (86)
3. "No problems" with information	19% (41)	36% (78)	45% (94)	34% (65)
State C				
1. % "very useful"	38% (16)	31% (65)	22% (72)	27% (22)
2. Score of 1-3 on Utilization Index	56% (16)	44% (69)	46% (80)	42% (24)
3. "No problems" with information	33% (15)	42% (53)	30% (60)	47% (15)

* Clients who indicated that they had not had time to determine the value of the information are eliminated from base numbers.

** Numbers in parentheses are the bases of percentages.

some of the information because of the bulk and range of material presented in the packets. Thus, despite more problems, packets when combined with computer searches must have given the clients in State B a greater opportunity to find just that right piece of information to fit their need.

Although the number of cases in State C are smaller than elsewhere, it seems that it was their *manual* searches which were most successful -- in terms of *both* satisfaction and utilization. Comprehensive searches were least problem-ridden but not especially successful -- the same pattern as in State A.

While the utility of an information service must not be judged wholly on the basis of "problems" reported by clients in reading or applying the information to their situation (as seen above), it might be of some value to note the specific problems encountered with the products of different types of searches. One question that was asked of clients in our survey was the following:

> The following is a list of problems that may have arisen with any of the information which you received. Please check any of those which you experienced.
>
> It was not relevant to my problem or need ____
> It was not specific enough ____
> It did not provide guidance for implementation ____
> It was not comprehensive enough ____
> It did not tell me anything I did not already know ____
> It was too complex or technical ____
> It would be difficult to implement in my school or agency ____
> HAD NONE OF THESE PROBLEMS ____

Table 13.7 presents the proportion of clients who had each of the problems specified according to the type of search that was rendered.

The problems most often mentioned in all three states concerned *relevance* and *specificity*, two problems which might amount to the same

TABLE 13.7

THE PROPORTION OF CLIENTS WHO HAD SPECIFIC PROBLEMS WITH THE INFORMATION, ACCORDING TO TYPE OF SEARCH*

Problems	Type of Search Manual only	Computer only	Packet only	More than one type	Total
State A					
Relevance	11%	35%		14%	17%
Specificity	39	19		21	19
Guidance for implementing	39	8		9	10
Comprehensiveness	50	19		18	19
Newness (nothing unknown)	17	15		4	7
Complexity	-	-		3	1
Difficulty of implementing	-	8		7	5
Had none of these problems	28	23		41	41
N	(18)	(26)	(--)	(76)	(135)**
State B					
Relevance	27%	32%	20%	40%	28%
Specificity	37	24	20	32	27
Guidance for implementing	7	5	8	6	6
Comprehensiveness	24	19	15	12	17
Newness (nothing unknown)	10	5	12	11	9
Complexity	2	3	4	6	4
Difficulty of implementing	7	4	12	6	8
Had none of these problems	20	36	45	34	36
N	(41)	(28)	(94)	(65)	(278)
State C					
Relevance	20%	30%	28%	40%	30%
Specificity	27	30	22	60	30
Guidance for implementing	13	11	20	33	18
Comprehensiveness	13	23	10	40	18
Newness (nothing unknown)	20	15	3	7	10
Complexity	1	4	10	7	7
Difficulty of implementing	1	4	5	13	5
Had none of these problems	33	42	30	47	36
N	(15)	(53)	(60)	(15)	(143)

* Clients who indicated that they had not had time to determine the value of the information are eliminated from base numbers.

** The total column for State A includes cases for which no information on type of search was available.

thing, namely, a lack of "fit" between the client's specific need or situation and the information. Similar proportions of clients in all three states mentioned the problem of relevance, and in two states the problem of specificity. Next in order of frequency in all three states was the problem of *comprehensiveness*. Obviously, the clients are expecting information which *comprehensively* fits their *particular* need -- not exactly a contradictory set of expectations, but an extremely difficult combination to fulfill. Finally, in State C, 18 percent complained about the lack of guidance for implementation in the materials delivered. Interestingly enough, *very small proportions mentioned that the information was too technical or complex*. Now let us see if any of the problems which we listed in our questionnaire are related to type of search.

Manual searches in State A were criticized for lack of comprehensiveness, lack of specificity, and lack of guidance by 50 percent, 39 percent and 39 percent, respectively. Twenty-three percent of those receiving *computer-only* searches mentioned that some of the information was not relevant, and 15 percent said that it did not tell them anything new. Otherwise, there was little difference between the search procedures in State A.

In State B, *manual* search was criticized for lack of specificity, lack of relevance, and lack of comprehensiveness by 37 percent, 27 percent, and 24 percent, respectively, of the clients who received manual-only searches -- a somewhat better showing than in State A, although generally the same problems were mentioned. *Comprehensive* searches were noted as affording information that was not relevant by fully 40 percent of the clients; and 32 percent said that some of the information was not specific enough. However, this level of criticism mainly reflects computer searches, for computer-only searches were criticised as not relevant and not specific enough by 40 percent and 32 percent of the clients, respectively, while packets were criticised on these two counts much less frequently (20 percent).

In State C, comprehensive searches were once again criticised quite often, reflecting of course the greater amount of material yielded by such searches. However, sizable minorities of clients also criticised the other search procedures for several reasons, in particular, computer searches for lack of relevance and lack of specificity (30 percent each), manual searches for lack of specificity (27 percent) and packets for lack of relevance (28 percent).

Overall, manual search was less often criticised for lack of relevance than computer search, but more often criticised for lack of specificity and comprehensiveness. This suggests that manual searches are better tailored to client's needs, but their quality is lower because of reliance on local resources.

Packets are also less often criticised for lack of relevance than computer searches, but only in State B. In both States B and C, however, they are criticised less often for lack of specificity and lack of comprehensiveness. Thus, speaking strictly in terms of the quality and relevance of information, it would appear that packets are superior to computer in-depth searches. Only in State B are they superior in terms of subjective utility and utilization, however. This result is no doubt due to the fact that State B resisted the temptation to become largely a packet service, while State C did not. The dissemination of packets with discretion is clearly justified. Now let us return to the question of the relationship between different types of search, on the one hand, and satisfaction and utilization, on the other.

Search procedures are often selected which seem to promise the greatest benefit for the particular client or need, and we have ample evidence that this has been a matter of constant concern to the three state projects. The fact that type of search is unrelated to utilization (with the exception of State B's manual search) may therefore simply mean that search modes were suitably tailored to features of requests so that all clients tended to receive equally valuable service.

One feature of requests that might dictate the type of search is specificity of the topic, at least in States B and C. Earlier (Chapter 7, Table 7.7) we found that in State B highly specific requests most often received either a manual or a computer search; moderately specific requests, a computer-only search; and unspecific requests, solely a packet. In State C, highly specific and moderately specific requests were most likely to receive a computer-only search, while unspecific requests most often received only a packet, as in State B. In State A, however, requests at all levels of specificity usually received a manual-plus-computer search. Now let us see which, if any, of these tactics were the best for clients.

In Tables 13.8 and 13.9, we have marked with an asterisk those percentages which correspond to the type of search most frequently given for each level of specificity (i.e., the modal procedure as indicated by the total request forms). These percentages should be at least as high as those for other searches if the tactics of the retrieval center were the most appropriate. Moreover, if such tactics were adopted to *take advantage* of the specificity level of a request, then requests which were handled by the modal tactic should yield *higher* proportions of satisfied and utilizing clients than other tactics.

From an examination of Tables 13.8 and 13.9 (satisfaction and utilization, respectively), it appears that the tactics of the retrieval centers were not always adequate. In State A the modal search procedure (comprehensive) did yield higher satisfaction than other searches for very specific requests, but no higher utilization. For requests of medium specificity, comprehensive search yielded no higher satisfaction or utilization; and for those of low specificity, it yielded higher utilization but no higher satisfaction. In short, the automatic manual-plus-computer search procedure was not necessarily called for. In State B, comprehensive search yielded higher utilization for requests at *all* levels of specificity, but *either* manual *or* computer was preferred for highly specific requests, computer-only for those of medium specificity, and packets for those of low specificity. And in State C, as far as we can tell because of small base numbers the modal tactic of computer-only searches yielded higher utilization and satisfaction only for highly specific requests. The conclusion to which these observations lead us is that certain modes of answering requests were applied in each state regardless of their ultimate utility for the client.

A simple, summary means of determining whether the modal procedure for a given level of specificity actually yielded higher satisfaction or utilization than other procedures is to compare outcomes of the combined modes with outcomes of the combined non-modal procedures.[1] Table 13.10 presents

---

[1] This technique was suggested to us by Mario Moore, our coding and computer supervisor.

TABLE 13.8

VALUE OF INFORMATION ("VERY USEFUL"), ACCORDING TO TYPE OF SEARCH AND SPECIFICITY OF TOPIC

	Type of Search			
	Manual only	Computer only	Packet only	More than one type
State A				
Specificity				
High	38% (8)	(3/4)	-	53%* (19)
Medium	38% (8)	29% (14)	-	35%* (40)
Low	(2/4)	36% (11)	-	30%* (27)
State B				
Specificity				
High	14%* (22)	18%* (22)	-	13% (15)
Medium	25% (12)	26%* (49)	40% (10)	33% (42)
Low	(0/1)	22% (18)	27%* (33)	35% (23)
State C				
Specificity				
High	(1/3)	36%* (14)	(0/4)	17% (6)
Medium	(0/2)	35%* (17)	25% (18)	45% (11)
Low	(0/2)	33%* (9)	17%* (6)	(0/3)

* Indicates modal type of search for a given level of specificity as shown by total request forms. Orders for specific packets are excluded from this table.

TABLE 13.9

USE OF INFORMATION (SCORE 1-3 ON UTILIZATION INDEX), ACCORDING TO TYPE OF SEARCH AND SPECIFICITY OF TOPIC

	Type of Search			
	Manual Only	Computer Only	Packet Only	More than One Type
State A				
Specificity				
High	67% (9)	(3/4)	-	47%* (19)
Medium	30% (10)	31% (16)	-	36%* (46)
Low	(1/4)	27%* (11)	-	41%* (27)
State B				
Specificity				
High	21%* (24)	33%* (24)	-	56% (18)
Medium	43% (14)	38%* (55)	40% (10)	50% (44)
Low	(0/1)	25% (20)	41%* (34)	46% (24)
State C				
Specificity				
High	(1/3)	44%* (16)	(0/4)	14% (7)
Medium	(1/2)	37%* (19)	62% (8)	55% (11)
Low	(1/2)	33%* (9)	50%* (6)	(2/3)

* Indicates modal type of search for a given level of specificity as shown by total request forms. Orders for specific packets are excluded from this table.

these summary statistics for each state.

In States A and C, somewhat higher satisfaction resulted from modal procedures, while in State B the reverse was true. The differences, however, are quite small in either direction. And when we turn our attention to utilization, we find that in none of the states did the combined modal search tactics produce greater utilization than the combined non-modal tactics. These results clearly point to deficiencies in retrieval activities. Thus, the time-consuming and expensive dual searches in State A seem often unnecessary. The dedication to computer-only searches in State B is not especially productive. And as best we can tell in State C, the use of computer-only searches is not always advisable.

We also observed earlier (Chapter 7, Table 7.7) that definiteness

TABLE 13.10

PROPORTION OF CLIENTS WHO HIGHLY VALUED INFORMATION AND WHO UTILIZED INFORMATION, ACCORDING TO MODAL AND NON-MODAL TYPES OF SEARCH WITHIN LEVELS OF SPECIFICITY

	% "very useful"		% utilized*	
	Modal type of search	Non-modal type of search	Modal type of search	Non-modal type of search
State A	40% (72)	35% (63)	41% (78)	38% (68)**
State B	23% (126)	29% (121)	35% (137)	44% (131)
State C	33% (46)	23% (39)	40% (50)	42% (40)

* Score of 1-3 on Utilization Index.

** Numbers in parentheses are bases of percentages. These bases represent clients who received either modal or non-modal types of search within each of three levels of specificity.

of purpose was another feature of requests related to types of search, at least in States B and C. In State A, the modal type of search for all levels of purpose was, once again, a computer-plus-manual search. In State B, *definite* and *vague* purposes most often received computer-only searches, while requests with *unstated* purposes tended to receive packets. The same pattern held true in State C. To what extent were these modal search tactics adequate or called for?

As shown in Table 13.12, in State A comprehensive search (the mode) did not yield any higher utilization for either definite or vague purposes. (There are insufficient cases in the no-purpose category.) In State B, *packets* yielded highest utilization for definite purposes, but computer-only search was the mode; and *comprehensive* search yielded highest utilization for vague and unstated purposes, but computer-only was most often employed for vague purposes and packets for unstated purposes. Similarly, in State C, the modal type of search was not as beneficial to clients as other procedures within any of the three levels of purpose. In none of the three states did the modal procedure yield higher satisfaction or higher utilization when applied to *definitely stated purposes*. This is a very odd state of affairs. (Statistics regarding satisfaction are shown in Table 13.11.)

It is noteworthy that the relatively easy tactic of sending packets worked as well as other searches only in State B where packets for both unstated purposes and definite purposes yielded at least as much satisfaction and utilization as other types of searches. Indeed, for definite purposes, packets yielded highest satisfaction and utilization. *In State C, however, where packets tended to be delivered broadside, they were much less success-*

TABLE 13.11

VALUE OF INFORMATION ("VERY USEFUL"), ACCORDING TO TYPE OF SEARCH AND DEFINITENESS OF PURPOSE

	Type of Search			
	Manual Only	Computer Only	Packet Only	More than One Type
State A				
Purpose				
Definite	25% (12)	25% (16)	-	30%* (44)
Vague	67% (6)	58% (12)	-	43%* (28)
Not stated	(1/2)	(0/2)	-	50%* (14)
State B				
Purpose				
Definite	29% (17)	22%* (36)	50% (14)	29% (41)
Vague	16% (19)	28%* (47)	26% (39)	31% (32)
Not stated	17% (6)	- (6)	34%* (70)	29% (7)
State C				
Purpose				
Definite	(0/2)	17%* (12)	(0/3)	33% (9)
Vague	(0/2)	35%* (17)	20% (15)	22% (9)
Not stated	50% (12)	53% (19)	26%* (38)	(1/2)

* Indicates modal type of search for a given level of definiteness of purpose as shown by total request forms. Packet-only for unstated purposes generally represent orders for packets.

TABLE 13.12

USE OF INFORMATION (SCORE 1-3 ON UTILIZATION INDEX), ACCORDING TO TYPE OF SEARCH AND DEFINITENESS OF PURPOSE

	Type of Search			
	Manual Only	Computer Only	Packet Only	More than One Type
State A				
Purpose				
Definite	46% (13)	39% (18)	-	38%* (47)
Vague	25% (8)	42% (12)	-	42%* (31)
Not stated	(2/2)	(0/2)	-	43%* (14)
State B				
Purpose				
Definite	44% (18)	37%* (41)	57% (14)	44% (43)
Vague	14% (22)	32%* (53)	34% (41)	56% (34)
Not stated	43% (7)	33% (6)	40%* (72)	56% (9)
State C				
Purpose				
Definite	(0/2)	29%* (14)	(0/3)	44% (9)
Vague	(1/2)	37%* (19)	47% (15)	33% (9)
Not stated	67% (12)	58% (19)	39%* (44)	(2/4)

* Indicates modal type of search for a given level of definiteness of purpose as shown by total request forms. Packet-only for unstated purposes generally represent orders for packets.

ful in terms of both satisfaction and utilization than other types of search when provided for clients with unstated purposes. It becomes clear, therefore, that the strong devotion to packet service in State C was sometimes indiscriminate, and perhaps even detrimental to certain clients who should have received manual or computer searches instead. (See summary Chapter 8 for a discussion of the extent to which State C's packet service affected retrieval operations.)

If we compare modal and non-modal procedures for different levels of purpose overall (see Table 13.13), we find once again that the commonly preferred tactic does not yield higher utilization in any of the three states, and that it yields higher satisfaction in only one (State A). In fact, non-modal tactics appear to have been more beneficial in State C. This paradox is attributable to the delivery of packets for requests with

TABLE 13.13

PROPORTION OF CLIENTS WHO WERE VERY SATISFIED WITH INFORMATION AND WHO UTILIZED INFORMATION, ACCORDING TO MODAL AND NON-MODAL TYPES OF SEARCH WITHIN LEVELS OF DEFINITENESS OF PURPOSE

	% "very useful"		% utilized*	
	Modal type of search	Non-modal types of search	Modal type of search	Non-modal types of search
State A	40% (72)	34% (65)	41% (78)	39% (70)**
State B	24% (89)	28% (263)	37% (166)	42% (194)
State C	26% (68)	34% (73)	36% (77)	48% (75)

* Score of 1 - 3 on Utilization Index.

** Numbers in parentheses are base numbers of percentages. These bases represent clients who received either modal or non-modal types of search within each of three levels of definiteness of purpose.

unstated purposes. Thus, only 26 percent of the clients who received packets for unstated purposes felt that the information was "very useful" and 39 percent used it, compared with 51 percent and 60 percent, respectively, of the same sort of clients who received all _other_ types of searches. Clearly, _packets are not intended for indiscriminate dissemination_, and may even subvert the goal of identifying a client's specific need or purpose so that his interest might ultimately be served.[1] On the other hand, if the client's need is clearcut, and a package exists which is addressed directly to that need, then it should by all means be provided, as shown by the success of packets for definite purposes in State B.

Let us be perfectly clear. We are not asserting that the retrieval staff of the three pilot projects were not making sincere efforts to tailor the search to the request. We are fully cognizant of their many attempts to do so. But it does seem that these efforts were not sufficiently guided by the unique features of different requests. A tendency toward the adoption of certain commonly favored tactics indicates that much greater flexibility is desirable. The _effectiveness_ of greater flexibility might well depend on greater knowledge of the requester, his need and his setting than has been available to the retrieval centers. Thus, we have stressed at several points in our report the importance of gaining more information about clients in a systematic fashion, and have offered tentative guidelines for arriving at a better determination of client needs and commitments. (See Chapter 3, and also Appendix G.)[2] Quite obviously, more work must be done on this problem not only by retrieval staff members who are willing to monitor their own operations (for example, by engaging in the kind of "social bookkeeping" and analysis exemplified here), but by researchers as well. More refined analysis of our own survey data might substantiate the importance of certain client characteristics other than those discussed; but given limitations of time and the primary goals of our evaluation, this task has proven to be impossible within the present study.

---

[1] It is very curious that the one state which set out to "diagnose" the problems of clients wound up giving indiscriminate package service.

[2] Our "model"request form in Appendix includes a few pieces of information about clients which were omitted from the request forms of the pilot states. Individual retrieval centers might wish to add more information.

PART VII

CHAPTER 14

RECOMMENDATIONS FOR FUTURE PROJECTS

A number of recommendations have been made in the different parts of our report. It might be helpful, therefore, to draw them together in a separate section. Recommendations for future projects are grouped according to (A) organizational issues, (B) information retrieval, and (C) activities of field agents. Rationales for the recommendations are fully spelled out in the chapters devoted to each of these three domains of functional competence.

A. Organization

(1) A statewide dissemination-extension project should be instituted as a separate office with its own clearcut identity in the State Education Agency. A definite and easily identifiable entity increases the ability of the project to develop sustained contact with other offices, and to become institutionalized within the SEA without jeopardizing its goals. If an active research and development division already exists in the agency, the project should be located therein. Otherwise, an attempt should be made to locate it within the division of curriculum and instruction where it may serve as a seed bed for a wider research and development program within the agency.

(2) Before beginning the project, it is important to formulate goals at three levels: outcomes, which reflect the overall desired impact of the project on educational policies and practices within the state; tactical goals, which specify techniques of retrieval and field agent work; and strategy goals, which relate general goals to tactics. Goals at all three levels should be formulated for each of the three elements of the project: management, retrieval, and field agentry.

(3) Goals should be reassessed informally at every staff meeting, and formally once a year (possibly in the summer) at a staff retreat. All staff members should be included in these sessions.

(4) The management of the project should be shared by (1) a full-time project manager with responsibility for the supervision of retrieval staff and field agents and (2) a part-time project director with responsibility for maintaining liaison with external organizations and SEA officials, providing overall budgetary direction, and reporting to a Deputy Superintendent in the State Agency. If the project director is part-time, a certain amount of integration into the agency will be insured by his other position. (Once the project is well established, it might be possible to limit management to one full-time position.) The co-managers should work together in developing long-range goals and procedures. Thus, the project director should meet weekly with the project manager and retrieval staff to keep up-to-date on project activities and to inform lower level members of his own activities, deliberations and plans.

(5) Technical assistance should be provided to the project by the SEA as well as by local sources. It should be the responsibility of the project director to negotiate with the SEA to obtain understanding on the minimum and maximum proportion of time which might be requested of an average consultant during each year. While it is important to ensure that some consultant help is available before the project begins, actual negotiation of the minimum-maximum time to be allocated should be carried out approximately six months after the program is instituted in order to allow for a realistic assessment of the need for technical assistance. In addition to working with clients in the follow-up phase, consultants and specialists should be willing to provide help to the retrieval staff in negotiating requests or in locating material. (An up-to-date inventory of resources available in the separate offices of the SEA staff would facilitate the latter process.)

(6) The central role of SEA specialists should be to provide back-up services for the agents in the field as contrasted with regulatory functions. While the dissemination project may help the SEA to achieve its own goals by enabling it to accumulate research and development facilities, and by providing essential information to clients, the service functions of the program should be insulated from the regulatory functions of the agency. Without such insulation, it might be very difficult to ensure local acceptance of the project.

(7) Field agents should be located in intermediate agencies (regional resource centers, intermediate education districts, county offices or larger district offices). They should be identified with these local structures rather than with the SEA. Care should be taken to locate agents in organizations which have a history of good relations with the local schools and districts. The intermediate organization should be a service agency so that local consultants and other staff will be available to help the agent in his work, and in turn be helped by him.

(8) Staff meetings which include field agents should be held monthly at least. The purpose of such meetings should be to allow personnel to communicate with one another regarding the following issues: problems and successes, future plans and goal modifications, evaluation of activities and output. and training needs.

(9) To facilitate communication and understanding of the project, the full-time manager should visit each agent in the field at least once every two months -- not for the purpose of "checking up" on the agent, but to learn about his problems, needs and successes at first hand, and then to take whatever action is required to facilitate his work. Retrieval staff members should also be encouraged to visit the field, especially in the beginning of the project.

(10) To help overcome the communication problems that persist in "dispersed organizations," staff members should be encouraged to communicate by telephone. Accordingly, the project budget should include a large item for telephone bills.

(11) Reporting and evaluation forms should be designed for field agents. These forms should be brief so as not to take too much time, but should include the following information on a day-to-day basis: all contacts with clients (potential or active), how and where the contact was made, a brief summary of what transpired, outcomes, and the amount of time spent on the contact. These forms should be tabulated and analysed on a monthly basis by the project manager and the results fed-back and discussed with the agents. Feedback is most important during the first several months of the agent's work. Throughout the project, however, the agents will find that such records will help them to engage in appropriate follow-up and to assess their own priorities.

(12) A university based R&D expert should be commissioned on a retainership basis to perform the following tasks: observe the project overall, provide support and advice to the agents during field visits, serve as informal ombudsman, consult on particular programs within the area of his competency, and serve as liaison with others in the university who might be willing to donate consultation in exchange for certain services or for access to schools for training, research or product development. (The use of the project for student training in development and diffusion should be condoned and fully encouraged.) These individuals should be available for monthly staff meetings as well as for informal visits to target areas.

(13) The project should maintain contact with Research and Development Centers, Regional Labs, and other organizations doing product development. When field tested, products should be publicized and made available to clients of the service. Only by integrating product development agencies with statewide dissemination networks will a true system of national dissemination emerge.

(14) The appointment of part-time information personnel in the schools to serve as liaison with the retrieval staff does not create an extension system. Effective stimulation of requests and utilization of research materials at all levels of the educational community depend upon the work of full-time extension agents who are able to perform a variety of functions and who are not identified with traditional roles in the schools, i.e., teacher, administrator, specialist, librarian. Field agent activities should include publicizing the program, acting as a conveyor of research or other information, serving as a "process helper" in determining needs and setting up self-renewal structures, serving as a link between various levels of the local system, aiding clients in the interpretation and use of materials, etc. While combining these role-elements into a single job makes the position highly demanding, these multifarious activities should not be separated because *each contributes to the effectiveness of the other*. If the strain of performing all these functions becomes too great on occasion, certain of them might be delegated temporarily to consultants or to school personnel. (Obviously, if the agent is to perform these activities effectively, he must be employed *full-time*.

(15) All project staff should be willing to cooperate fully with independent evaluation teams imposed by federal funding. There should be no excuse for reluctance to provide outside evaluators who are genuinely interested in testing and improving the program with access to personnel and project data. Federal agencies should *terminate funding* when it appears that the project staff is unreasonably distrustful of evaluation by outsiders.

B. Information Retrieval

(1) The entire range of qualifications and capabilities required by an information retrieval staff should be envisioned in advance, and the staff should consist of at least two professionals. Thus, a project director might consider which skills are essential at the outset, how certain necessary capabilities (for example, computer expertise or familiarity with the potentialities and problems of computerized retrieval) can be provided for the service by outsiders if not by the initial staff, and the advantages that will accrue from a diversification of backgrounds and of qualifications of staff members. Skills should include technical writing (for summaries of research), library use, translation of user language into retrieval parameters, familiarity with educational trends and with local settings, coding of requests for computer searches, and criteria of good research. Strong managerial and human relations skills should be possessed by the retrieval manager. (For a detailed list of the outstanding training needs of retrieval personnel, see Appendix H.)

(2) The record-keeping and filing systems of operational centers should be studied first-hand by personnel establishing a new information service. Basic systems should be outlined in advance and maintained from the outset. Considerable expertise and guidelines on this score have evolved through the trial-and-error experiences of existing retrieval services.

(3) Retrieval centers should adopt a stance of continual reassessment of their modus operandi. A constant balancing of cost factors against the quality of output and service, and of what is feasible with available staff and technology -- these are the basic issues behind questions of whether requests can be answered by manual or by computerized search, and which requests should be serviced by packages and which by individualized searches.

(4) An essential task is the measurement of client satisfaction and utilization of the information, as well as of the technical problems which are encountered in dealing with the information and its degree of relevance. Measurement can be accomplished by sending evaluation forms to all first-time users, and to a sample of second-time users. (See our questionnaires for clients, Appendix B, and the analyses based on these questionnaires, especially in Chapters 5 and 12.) These forms should not be sent to clients until about three weeks after they have received information. (See Chapter 12, page 505, footnote, for reasons that forms should not be delivered with information.)

(5) An information request form should include data on type of search, purpose of request, nature and amount of information delivered, and special features of the client and his setting. (See the model request form in Appendix F, and suggested dimensions for characterizing clients and their setting in Chapter 4 and Appendix G.) One copy of the form should be retained by the agent when the request is forwarded to the retrieval center. Information contained in these forms should be tabulated and analysed monthly.

(6) States should try to develop their own computerized computer-retrieval facility, but not until major problems in management, field activities, and retrieval processes have been ironed out. Thus, arranging for service from a pre-existing computerized retrieval center, usually provided on a regional basis, should be considered an advisable expedient in the first months of the project.

(7) If the retrieval techniques of a new information center are to become more sophisticated and its services more individually tailored, extensive communication between field agents and retrieval specialists is required. Both types of staff members should be familiar with different kinds of searches and their appropriateness for individual clients. Jointly they should attempt to codify information about the clients and his setting which is required for differentiation of service.

(8) Retrieval personnel should screen computer-retrieved information for relevance and quality. This process will not only help the client, but will serve to familiarize the staff with material available on different topics.

(9) The computerized search for abstracts of existing educational knowled is only the first step toward the real goal of the information service, which is to provide hard copies of research documents, articles or reports (or sections thereof) which would be useful to clients. Procedures for completing the process should be determined in advance: in what form should complete copy be provided, microfiche or hard copy? how and where can either microfiche or hard copy be obtained? if microfiche, what techniques can be adopted to overcome any obstacles which this format presents for clients? how much will complete copy cost and who will pay for it? what hardware is available and what will be necessary to make the whole process function? how can the necessary resources and hardware be obtained? (A helpful s[illegible] of guidelines for needed resources has been prepared by John Coulson[illegible]tional Institute for Education, Washington, D.C.)

(10) The rationale behind packaged information should be well understood. To the extent that packages are used, it should be with full awareness of differences between information supplied on this basis and the aim of individualized service -- differences in approaches to clients, interpretation of the material, and likelihood of being implemented. Packets should be supplied when the purpose or topic of the request clearly call for an existing packet. If supplied for vague or unstated purposes (e.g., to raise awareness), follow-up should be conducted to focus on more individualized concerns. Quite obviously, if packets are dispensed broadside, then follow-up in many cases will become impossible. Above all, the dissemination service must not become identified with the "junk mail" which is typically sent to educators.

(11) An information service that decides to install QUERY should plan to send their computer and retrieval personnel to an installation with a similar computer capacity and set-up in order to study the problems which have been experienced and their solutions. Alternatively, or in addition, the Office of Education or the QUERY contractor should "nursemaid" new installations which are attempting to achieved computerized search capabilities. This responsibility should extend to the point where the program is operational -- and to some extent efficiently and economically operational -- not just to the point of purchase and installation.

C. Field Agent Work

(1) There should be one agent for approximately every 300 potential clients. The average case load of all the agents combined was 13.4 clients per month, or 120 clients per nine-month school year. Thus, with a target audience of 300, a typical agent could reach 40 percent of the school personnel in his area in a given year, and conceivably even half. (Because there was a fairly wide range in caseloads owing to different population densities, these figures should be taken only as rough estimates of central tendencies.)

(2) It would be highly advisable to employ a team of agents for each target area. At least one of the team members should have an administrative background and another a teaching background. This does not mean that each individual should specialize strictly according to either administrators' or teachers' requests, nor should any hierarchical differentiation be apparent within the team. The purposes of a team are to provide mutual support in a highly marginal role, to share insights into problems and needs, to reduce overload and facilitate follow-up, to increase the coverage of the service to teachers and administrators alike, and to enhance utilization by "cross-fertilization."

(3) Agents should be hired who reflect the educational climate or outlook in the area to be served. This will usually mean that they should have past experience as a teacher, administrator or specialist in the target districts.

(4) Former superintendents should not be hired as field agents unless their work will be restricted to the upper levels of administrative clientele. Such individuals are accustomed to exercising a good deal of authority and therefore might have some difficulty adjusting to the absence of official power and the marginal status associated with the agent's job.

(5) With regard to personality traits, an individual hired as a field agent should be non-authoritarian, patient with clients who have trouble articulating their need or using information, able to tolerate delay and ultimate frustration in obtaining results, have low need for ego-aggrandizement, and enjoy performing a variety of activities and meeting a wide range of people without a sense of becoming "hassled." When the situation demands, he should be able to exercise leadership among school personnel. Further, he should be capable of thinking and speaking clearly with a minimum of jargon and aura of expertise. Curiosity about educational developments and national trends should be a part of his professional make-up; but he must be able to resist the temptation to become a "missionary" for any particular practice. Above all, he should be adaptable to different situations and individuals, adopting a personal or impersonal manner as the situation dictates. Finally, he should be orderly and able to maintain

records and reporting systems. (Although we have adopted the patriarchal "he", whether the agent is male or female seems to be an irrelevant factor.)

(6) The most effective means of publicizing the program and stimulating requests in all sectors of the educational structure is through informal, interpersonal meetings with potential clients. A general publicity campaign conducted through SEA and intermediate agency newsletters should be used only for purposes of announcing the program, not for stimulating use. Nor should field agents rely solely on mass communication techniques (i.e., large meetings or mass media) in the early stages of program development. When the agent has been in operation long enough to have followed through on several successful implementations of retrieved information, he should then use mass media techniques to spread knowledge of the program's effectiveness. These techniques might include a short film about the service which employs satisfied clients as exemplars, or newsletters describing specific programs and requests recently handled by the agent. The first round of publicity visits should be kept separate from efforts to identify or diagnose problems, unless the personnel being contacted themselves initiate a request. Separation of the processes of publicizing and negotiating requests will avoid the appearance of pressuring prospective clients to adopt a new and seemingly untried service.

(7) Agents should try to identify "opinion leaders" and "self-starters" within their target districts, and involve these individuals in helping to disseminate new ideas or information to a larger audience than can be reached by the agent alone.

(8) Agents should be willing to try to answer virtually every felt need expressed by prospective clients in the beginning of the service, including personal favors such as acquiring information about the availability of funds for further training. Once access has been established, more serious attempts can be made to stimulate requests for research bearing on local professional problems. Similarly, "diagnosis" should not be attempted until the agent has fully established his credibility with clients or is asked to provide such service.

(9) Field agents should not engage in retrieval on the local level from resources which are duplicated in the retrieval center unless a client is extremely pressed for time. However, the provision of PREP kits or other packaged material on file might be useful to facilitate turnaround on highly standard or frequent topics of requests. As mentioned earlier, however, follow-up should be routinely practiced when dispensing packages.

(10) A half-time secretary-retrieval aide should be made available to each team of agents, providing the team comprises no more than three agents. A good deal of record-keeping, reporting and "instant" retrieval can be done by this staff member, thereby releasing the agents for professional level work. Also, it is important to have someone take telephone calls while the agent is in the field.

(11) Field agents should work with retrieval staff members in determining when technical assistance or consultant help might be useful, but they should also feel free to recommend consultant help on their own. If the agent is unable to accompany the consultant on his first visit to a client, he should check as soon as possible with the client to assess the visit and determine the need for follow-up.

(12) Field agents should review the materials which are delivered for clients so that they can keep abreast of the different types of information and ideas being dispensed within their area. In dealing with first-time users or with poorly motivated clients, screening of all material should be done. The better or more relevant ideas should be highlighted, while seemingly extraneous material should be omitted.

(13) Follow-up should be practiced with every client. While in most cases this follow-up might be limited to checking on the usefulness of the information, or a possible need for additional data, the agent should always be willing and available to become more involved in problem-solving at the client's request.

(14) Self-renewal structures should be set up at the building level to facilitate the use of the service. Thus, a research committee composed of the principal and several teachers might be established to periodically review and screen the areas in which information is needed. The field agent should try to meet with these committees.

(15) In urban areas there is a need to hire a number of agents because of the large number of potential requesters and also the structure's complexity. Agents should specialize by school level, although not by position of clients (with the possible exception of a full-time agent at the district office level to help specialists and C&I personnel). The urban agent should be given the authority to call upon the technical assistance of local specialists and consultants in the same way that the state retrieval office calls upon the services of the SEA. Also as in the case of SFA's,the service should be constituted as a separate office within the city structure to increase recognition of the program's uniqueness. Further, a council composed of the top schoolmen in the city should be instituted to serve as a monitoring and legitimative body for the service. By this means the agents will be relieved of the responsibility of constantly reporting to existing offices and working their way up and down the hierarchy every time a local problem needs information or amelioration. The project director should report directly to the city superintendent of schools.

(16) Field agents should receive on-site and off-site training for at least a year in the beginning of their work. (For a list of outstanding training needs see Appendix H.)